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ABSTRACT

Changes that occurred between 1972 and 1980 in the intended field of study and occupational aspirations of high school seniors were investigated, along with how successfully seniors attained their aspirations. Background, personal, and school variables associated with selecting each occupation and field among the 1980 seniors were analyzed in-depth. Data were obtained from the National Longitudinal Study of the High School Class of 1972 (data on base-year and fourth followup available for 13,847 students at 1,318 schools) and the High School and Beyond Study (data on 28,240 seniors at 1,015 schools). Major findings include: decreased interest in education and teaching occurred between 1972 and 1980; increased interest in computer/engineering/architecture fields and managerial/proprietor occupations occurred; the percentage of females planning to enter higher status occupations increased substantially; successful pursuit of occupation was highest among those in the housewife, craftsman/operative, and clerical/sales categories and lowest among those in the teacher, technical, and professional categories; and successful pursuit of field of study was highest among those planning to study education and the humanities and arts, and lowest among those planning a preprofessional study field. Additional findings and policy implications are considered. (SW)

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National Center for
Education Statistics

Occupational Aspirations and Intended Field of Study in College

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FOREWORD

This study examines the occupational aspirations and intended fields of study held by seniors in the National Longitudinal Study and in the High School and Beyond study, both sponsored by the National Center for Education Statistics. Three issues are examined: changes that have occurred between 1972 and 1980 in occupation and field choices and in various predictor variables, factors associated with successful pursuit of occupation and field of study among the 1972 seniors, and an in-depth analysis of factors associated with selecting each occupation and field among the 1980 seniors.

Some of the major general findings include the following:

... the most substantial changes in occupational selection between 1972 and 1980 were the decreased interest in teaching and the increased interest in managerial/proprietor occupations.

... the most substantial changes in field of study selection between 1972 and 1980 were the increased interest in computer/engineering/architecture fields and the decreased interest in education.

... the percentage of females planning on entering higher status occupations increased substantially, and the percentage female increased in seven of the nine fields of study.

... the influence of teachers on future plans increased in seven of the nine fields of study and is strongest among those planning to study education.

... successful pursuit of occupation is highest among those in the housewife, craftsman/operative, and clerical/sales categories and lowest among those in the teacher, technical, and professional categories.

... successful pursuit of field of study is highest among those planning to study education and the humanities and arts, and is lowest among those planning a preprofessional course of study.

... successful pursuit of occupation and field of study are both best predicted by a match between the sex of the respondent and the sex dominance of the occupation/field of study, by few early work and family commitments, and by greater academic preparation and performance.

... sex and educational aspirations are the most important factors in selecting an occupation.

... sex, aptitude, educational aspirations, science coursework, and work values are the most important factors in selecting a field of study.

Some of the findings on teaching and education include the following:

... those selecting the teaching and the education categories are less likely to be in the academic curriculum in 1980 than in 1972.

... the decline in self-concept among future teachers was the most substantial decline among the occupations.

... between 1972 and 1980, the decline in aptitude among those in the teacher and education categories was the most substantial among the occupations and fields of study.

... teaching was the only occupation in which the number of mathematics courses completed declined.

... the declines in science and foreign languages coursework completed by those in the teacher and education categories were the most substantial among the occupations and fields of study.

... education is the only field of study in which aptitude does not predict successful pursuit.

... successful pursuit of teaching and education are both best predicted by low aptitude, high college GPA's, few early work commitments, and greater mathematics preparation.

... the best predictors of selecting teaching are being female and high mother's educational aspirations.

... the best predictors of selecting education are being female, participation in sports, and high educational aspirations.

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CHAPTER 1

Introduction

The transition from youth to adulthood has become an increasingly important topic for both researchers and policy analysts. The period following high school graduation is a critical time of role transition and role acquisition, and young adults experience continued socialization and resocialization during this time period. Decisions made at this time are critical for the futures of young adults.

Two issues are particularly important for young adults: occupational aspirations and intended field of study in college. Together they reflect the two major events most high school graduates pursue: jobs and further education. In fact, career choice and work consistently rank near the top of the concerns expressed by high school students (Gobar, 1979). The first job assumed and the type and length of education pursued are important predictors of the life courses of young adults. Both involve a period of decision making characterized by multiple influences and frequent periods of indecision. Both are significantly influenced by individual characteristics, background characteristics, and school and life experiences. Both merit further study to better understand the causes and consequences of decisions in these two areas (Otto, Call, Spenner, 1981).

Research Issues

This study addresses three major research issues regarding the occupational aspirations and intended field of study of high school seniors. The first research issue examines the changes which have occurred between 1972 and 1980 in the occupational aspirations and intended field of study in college held by high school seniors. The first subtopic in this first research issue reviews the percentages of seniors selecting each of the occupation and field of study categories in each of the two study years. In order to assess the changing characteristics of those selecting each occupation and field of study category, the second subtopic examines the changes in the values of selected profile variables. A more complete analysis of who selects each category is the focus of the third research issue; the second subtopic of this first research issue concentrates on the changes that have occurred between 1972 and 1980 on the profile variables. Bivariate analysis was used for this subtopic. Since the profile variables may themselves be related, the third subtopic in the first research issue employs multiple regression analysis to determine the relative importance of each variable. The results enable a specification of the most salient variables and also allow an examination of several cohort interaction effects.

The second research issue assesses how successfully seniors have attained their occupational and field of study aspirations. The first subtopic presents the success rates for each of the occupation and field of study categories; comparisons are made and possible explanations for the different success rates are offered. The second subtopic presents bivariate analyses of the linkages between successful pursuit and the profile variables. Because the profile variables may themselves be related, the third subtopic employs discriminant function analysis to assess the unique effect of each profile variable.

The third research issue is an in-depth analysis of how a variety of factors are linked with selecting each occupation and field of study category. The first subtopic involves bivariate analyses of these linkages, and the second subtopic employs discriminant function analysis to assess the unique effect of each profile variable.

The two major dependent variables in this study are occupational and intended field of study selection and successful pursuit of occupation and intended field of study.

Both occupation and field of study were examined in terms of broad categories (11 for occupation and nine for field of study). Olvig and Darley (1972) documented the construct validity of expressed occupational plans by comparing such results with those obtained through extensive vocational testing. Successful pursuit of occupation was defined as a match between planned occupation and actually having worked in that occupation some time after high school graduation. Successful pursuit of field of study was determined by matching the intended field of study code with the code of the area in which a degree was obtained. Further details are provided in Chapter 2, Methods.

Policy Relevance

The results will be policy relevant for educators, legislators, and federal officials concerned with educational issues. The results for the first research issue, changes between 1972 and 1980, will assist college officials in modifying their curricula to meet the occupational and field of study plans of incoming students. Changes in the characteristics of students entering various fields of study will assist college officials in developing remedial or accelerated programs, particularly when they match their specific college populations with corresponding breakdowns in the analysis on such variables as race, sex, and SES. The detailed analyses per occupation and field of study category will enable college officials to more adequately respond in terms of their recruitment and socialization strategies. For example, the results show that the aptitude of those planning to study education has declined substantially; this finding may encourage college officials to alter entry requirements per field as well as to alter courses of study.

At the federal level, the results of the first research issue will assist in assessing and developing manpower needs and in assessing the congruency between aspirations and the occupational opportunity structure. For example, NCES projections indicate likely teacher shortages in several areas in the last half of this decade. The results will help project future availability of teaching personnel in these areas as well as estimates of their credentials. Federal assistance may be offered to colleges to train the necessary personnel. Similarly, those aspiring to several occupations experienced declines in science training over the last decade; federal assistance may therefore be offered to colleges and high schools to improve science training. Significant declines in aptitude and academic involvement suggest further federal support for remedial programs in college.

The results for the second research issue, successful pursuit, also have significant policy implications. At the federal level, the results offer suggestions for increasing the success rates for those selecting several occupations and fields of study. For example, the results show that coursework in mathematics and science is related to successful attainment of a teaching occupation. In light of projected teacher shortages, these data suggest that course offerings be improved to increase the successful pursuit of a teaching occupation. The results for educational and employment counseling may suggest federal assistance for the improvement of counseling services. Success rates in both occupational and field of study attainment (based on 1972 cohort) may help predict future availability of manpower in different areas when the predictors of successful attainment are applied to the 1980 cohort. Federal officials concerned with the role of institutions of higher education in meeting manpower needs will also find the results instructive in terms of helping such institutions to respond.

The analysis of realization of plans will be of use to educators by providing data on both the degree to which students aspiring to various occupations and fields of study attain these plans and the nature of those who successfully do so. The results identify predictors of successful pursuit, results that will enable college officials and other educators to improve the retention and graduation of students in various occupations and fields. For example, the results show that high school coursework in mathematics, science and English are highly predictive of successful pursuit in some occupations and fields but less predictive in others. Remedial coursework will then enhance the completion rates of students in these areas. The low rates of successful pursuit in some areas may encourage college officials to focus attention on students in these areas, perhaps by surveying them on their perceived needs.

An in-depth analysis of the 1980 senior cohort, the third research issue, also has several policy implications. First, the analysis will contribute to the manpower availability conclusions noted above for the first research issue. Second, the analysis will enable college officials to more realistically plan course offerings in areas of varying degrees of popularity. Third, the linkage of student and family background variables, as well as school experiences variables, with occupational and field of study selection will give college officials a more complete picture of the types of students they can expect to see entering the various programs in colleges. For example, the results show that those students planning on some fields of study have greater study habit problems than students entering other fields. The results also show the absolute and relative levels of aptitude of those entering the various fields, thereby enabling college officials to provide appropriate remedial or accelerated programs. The results also indicate the typical values held by students planning on various occupations, both general values and work-related values. For example, the results show that students aspiring to certain occupations are much more oriented to job security and good income than students aspiring to other occupations. Fourth, the results will be of interest to high school personnel by showing how such variables as quality of teaching, availability of educational and employment counseling, and teacher and counselor influence relate to occupational and field of study selection.

In summary, the policy implications of the study will be relevant for multiple audiences, both among educators and governmental personnel. In addition, researchers will find the results of the study relevant for theories on occupational decision making, socialization influences, status attainment, and individual versus school influences.

Theoretical Relevance

When examined from the perspective of a single discipline or from several disciplines, there does not yet exist a comprehensive theory of career entry, career development, or work roles (Otto, Call, Spenner, 1981:49). However, several theoretical emphases are relevant for this study. Three of the most relevant are status attainment models, occupational decision making theory, and opportunity structure theory.

Status Attainment Models

A variety of status attainment models have been presented over the last few decades. Most of these models begin with such exogenous variables as SES and mental ability, include such endogenous variables as aspirations and academic performance, and focus on either the first job or current job as outcomes. Over the years, the models have become increasingly complex with the inclusion of additional endogenous variables and with the application of increasingly sophisticated analytical procedures.

Hollingshead (1949) was perhaps the first sociologist to explicitly address both the social structural and social psychological aspects of the stratification process. In his field study, he examined the effects of curriculum location, educational and occupational aspirations, ability, and performance. Although Hollingshead did not perform a detailed causal analysis of his data and did not study his subjects long enough to establish clear causal linkages, his work clearly informed much of the subsequent work on status attainment.

Blau and Duncan (1967) were the first to posit and test a clear causal model. They linked SES background to education and to first as well as current occupation, and identified both direct and indirect causal linkages. They clearly documented the importance of SES background for occupational achievement.

Sewell, Haller, and Portes (1969) extended the Blau-Duncan model by incorporating aspirations and the influence of significant others, thereby demonstrating the importance of the plans held by students. Significant others studied include parents, teachers, and friends. Parents and teachers are thought to provide "defining" encouragements while peers are thought to provide "modeling" influence. These significant others also apparently use academic ability and performance as cues for determining the nature and extensiveness of the support offered. Therefore, this model integrates some of the core issues raised by reference group theorists (e.g., Merton, 1957), and extends the explanatory power of the model. These researchers argue that aspirations are the key conduit through which socioeconomic advantages are transmitted to subsequent generations (Haller and Portes, 1973).

Alexander, Eckland, and Griffin (1975) attempted to replicate the Blau-Duncan and the Sewell, et al. models in their Explorations in Equality of Opportunity sample. They focused on the role of educational expectations in their assessment of the theoretical prominence of student plans. Using educational aspirations in addition to social origins increased the predictability of educational attainment by about 20 percent over the effects of social origins alone. Academic aptitude also influences educational aspirations.

More recently, Jencks, Crouse, and Mueser (1983) have assessed the models developed by Sewell, et al. and Alexander, et al. through reanalyses of Project Talent data. Their results generally substantiate those models, and the data limitations of the models do not introduce systematic bias. Paying more attention to response error, Hauser, Tsai, and Sewell (1983) also found further empirical support for the Wisconsin model. In short, the dominant models of status attainment have received considerable theoretical and empirical support.

Unfortunately, virtually all these early studies included only men. Falk and Cosby (1975) argue that the Wisconsin model is inadequate for explaining the status attainment of women. They build on the concept of "career contingencies" (cf. Duncan, Featherman, and Duncan, 1972) and highlight two factors particularly salient for status attainment among women: marriage and fertility. Several other variables are also added, based on theoretical considerations. These variables include mother's educational attainment, physical attractiveness, and the sex configuration of siblings. They document the importance of marriage and family expectations and show how these expectations develop at about the same time as educational and occupational aspirations develop.

Jencks and his colleagues (1972, 1979) reanalyzed several major data sets to further specify the effects of school and background variables on economic success. In both works, Jencks underscores the role of family background for educational attainment. He also notes a clear linkage between educational attainment and occupational status and income. In the 1979 volume, he documents the importance of finishing college over simply the number of years of education completed. In both studies the role of academic aptitude is also shown, especially early measures, so that individuals themselves as well as others will use these indicators to establish expectations. The 1979 volume also addresses the role of leadership abilities and personality traits. Unmeasured variables play a major role in both volumes, although in the earlier volume Jencks refers to such variables as "luck." Both volumes have been criticized, although their synthetic quality, based on multiple studies, has been widely noted.

The status attainment literature is relevant for this study in several respects. First, in its focus on selection of and successful pursuit of both occupation and intended field of study in college, this study fits in this larger literature. Both occupation and field of study are core elements in an assessment of status attainment. Second, the status attainment literature has clearly documented the centrality of aspirations and plans for status attainment (cf. Garrison, 1982). Hence, this study examines intended occupation and field of study.

Third, the status attainment literature still contains lacunae. Three of these are addressed in this study. In its emphasis on predictors of attainment of high status jobs, this literature fails to examine the factors predicting selection of each major occupational category. Hence, this study examines predictors for selecting each of the major occupational categories. Second, this literature examines actual status attainment. A parallel theoretically interesting issue is the relevance of many of the predictors for successfully pursuing whatever occupation was selected. That is, equally theoretically important to attaining a high status occupation is actually attaining an intended occupation. As suggested by Alexander, Cook, and McDill (1978), a wide discrepancy frequently exists between plans and successful pursuit of plans. As suggested by Boocock (1980), many variables do not necessarily have the same effects on aspirations and attainments. Yet few researchers have examined such discrepancies, much less the factors correlated with successful pursuit. Hence, this study develops predictive models for successful pursuit of each major occupational category. Third, this literature includes only years of education and college graduation as key education variables. Few researchers have studied the actual fields of study selected and pursued by those aspiring to various occupations. Hence, this study examines the predictors of selecting each major field of study category, and also develops predictive models for successful pursuit of each field.

The status attainment literature is relevant in a fourth respect. This extensive literature provides much evidence on the importance of a variety of variables reflecting family background, significant others, school factors, and intended and actual family formation. In using many of these same variables, this study extends the status attainment literature by linking these variables to selection of occupation and field of study as well as to successful pursuit of both.

Fifth, this literature clearly shows the importance of longitudinal designs. This study employs both panel and cohort analyses to more clearly understand the occupational and field of study choices made by adolescents. Finally, the status attainment literature has been criticized for its failure to include women; this study employs two of the largest studies of both male and female adolescents.

Occupational Decision Making Theory

Several writers, particularly social-psychologists, have addressed the process whereby adolescents make career decisions. Ginzberg (1951) and Super (1957) have contributed most to this approach. Ginzberg described vocational choice as rooted in the maturation process. Hence, the final occupational choice results from a process occurring over years. Early fantasy choices merge into tentative choices, which in turn merge into more realistic choices. This process occurs as individuals develop a future self-image, have experiences, and learn about their capabilities, resources available, and the realities of the world of work. The "realistic" choice made by an individual, therefore, is a compromise between his or her interests, capabilities, and values and the realities of the larger social and occupational situation. Super stressed the development and implementation of a self-concept. The individual translates this self-concept into occupational terms and "actualizes" a self-concept with progression into the occupational world. Individuals often employ role-playing in this process. Both Super and Ginzberg stress the developmental nature of occupational decision making, the importance of the self-concept, and the circumscribing effect of the occupational labor market (cf. Levine, 1976).

A more sociological approach was developed by Blau, et al. (1956). They noted that the processes involved in occupational selection, as experienced by individuals, must be accompanied by an examination of the social and economic conditions influencing the selection of individuals by those doing the hiring. That is, occupational choice does involve a compromise between preferences and expectations, but researchers must also incorporate the nature of the labor market in their analyses of occupational decision making. Hence, social structure both influences the personality development of those selecting occupations and defines the socioeconomic conditions of selection (cf. Ford and Box, 1974; Levine, 1976).

Other social scientists have also contributed to the literature on occupational decision making. Musgrave (1974) argues that there is no sociological theory of occupational selection and notes that the approaches of Ginzberg and Super, among others, are primarily descriptive. Musgrave argues that socialization theory is the most relevant, particularly economic socialization and socialization into the occupation. In response to Musgrave, Coulson, et al. (1974) argue that a more conflict based approach is needed. That is, most societies contain power imbalances, reflected in their occupational structures. Differential socialization experienced by members of the various social classes helps perpetuate these differences. Similarly, Ford and Box (1974) disagree with Musgrave's pessimistic view of theory development in this area, and argue that considerable consensus exists on an implicit theory of occupational choice. They cite as evidence the general agreement that occupational choice is primarily a rational choice involving personal values and expectations about the occupational structure. On the other hand, McFalls and Gallagher (1979) conclude that social scientists know little about the occupational values and choice processes of adolescents, and Timperley and Gregory (1974) question whether choices are made in terms of an occupation, a job, or a career, or whether or not a choice is actually made. Furthermore, it is not even clear which adolescents choose first, their occupation or their major (Goodson, 1978).

Several aspects of this occupational choice literature are relevant for this study. First, this literature clearly highlights the role of social-psychological variables, particularly self-concept. Therefore, both self-concept and locus of control are included in the analyses. Second, the implication of the developmental approach noted above is that social scientists should generally use those individuals relatively far along in the maturation process, for whom the "realism" levels are quite high. Hence, this study uses only high school seniors. Third, the importance of various socialization factors and agents is clear. Hence, this study examines the effects of socialization background, significant others, and school factors in an attempt to more clearly identify the factors relevant for occupational decision making. Fourth, the importance of the larger social structure is underscored. Hence, this study incorporates such social structural factors as the sex composition of occupations and the oversupply and undersupply in various occupations.

Opportunity Structure Theory

Opportunity structure theory represents the opposite of occupational decision making theory. Opportunity structure theory does not focus on occupation and does not assume the rationality characteristic of occupational decision making theory. Therefore, opportunity structure theory does not assume that occupational choice precedes entry into the labor force. Instead, each juncture is seen as an opportunity point, with factors present that both promote and discourage the selection of a given choice. For example, high school is a critical period for occupational choice theorists because it is a period during which students develop realistic understandings of the occupational structure and the nature of work, particularly since many occupations require postsecondary education. Opportunity structure theorists argue that education and work pose alternative opportunities, to be chosen on the basis of their relative attractiveness at the time of the actual decision. Hence, most careers are better described in terms of an "opportunity structure" since individuals do not pursue a completely rational choice model but instead use opportunity situations (e.g., leave school, change jobs) to make periodic decisions about all aspects of their careers (cf. the discussion of "drift" in occupational choices by Timperley and Gregory, 1974). As a result, most individuals do not remain in the same occupation throughout their careers, and they do not select their occupations before their education and entry into the labor force (Roberts, 1974; Rothstein, 1980). Similarly, researchers such as Astin and Panos (1969) note that as many as 75% of all students change majors at least once during college.

If the rational choice model were the most accurate, then high school students would know a great deal about the occupational structure and would have reasonably stable career plans. But much research exists to suggest that both these conclusions are not correct. For example, Folger, Astin, and Bayer (1970) found that only 27% of ninth graders had the same occupational preferences one year after high school graduation, and Dole (1963) found that only 45% of ninth graders retained the same occupational choice two years later. Rothstein observes that "there is overwhelming evidence that high school students know little about the occupational structure" (1980:331; see also Laska and Micklin, 1979). DeFleur and Menke (1975) concluded that knowledge about occupations is "quite low" and did not increase between the ages of 16 and 19, despite the increased salience of occupation. Freeman (1971) showed that, in contrast to the linear rational progression outlined by the occupational choice theorists, college students respond to changes in the demand for a particular occupation by adjusting their occupational choices. Folger, et al. (1970) also found that 30% of college freshmen and 24% of seniors were in the "other" category, and that the proportion changing occupations was 63-72%. Slocum (1956) found that only 37% of those planning to attend college felt sure of their major. Katz and Martin (1962) observed that most college students have only the vaguest notion of the career implications of their academic major programs.

The thrust of these and other research findings is that adolescents know little about the occupational structure and that most make occupational choices in an incremental fashion based on personal opportunity situations negotiated within the larger social structure. Also, adolescents are unrealistic in predicting their own job selections and success (Weinstein, 1980). In effect, these findings call into question the centrality of aspirations noted above in the review of status attainment models. In fact, Gottfredson and Becker (1981) argue that vocational aspirations are largely a reflection of employment experiences and opportunities, and may not function as important determinants of future behavior. Their research findings show that adolescents frequently attain congruence between their aspirations and actual occupation by simply changing their aspirations to match their occupation.

This theory directly pertains to Research Issue 2, which examines both the rates of successful pursuit and factors associated with successful pursuit. Relatively low success rates (about 20% or less) will support the opportunity structure theory; the connection between the rationally determined choice and actual attainment will be weak in such cases. Alternatively, relatively high success rates (about 50% or more) will refute the opportunity structure theory and will instead support the occupational decision making theory with its emphasis on rational choice and pursuit of such choices. In addition, the study will make a contribution to this literature by examining factors associated with successful pursuit; few in the literature have gone on to study such connections (cf. Wagenaar, forthcoming).

Previous Research

An exhaustive literature review yielded three major conclusions. First, while a considerable literature exists on occupational selection, few researchers have studied the selection of specific occupations and few of those who have studied selection of specific occupations have gone beyond sex, race, and SES as predictor variables. Second, few researchers have studied field of study, and even fewer have examined the factors associated with selecting specific fields of study. In fact, Lunneborg (1977:213) observes that "predicting choice of major continues to be a most difficult task." Third, few researchers have studied successful pursuit of a planned occupation or field; instead, the focus is more on attainment of higher status occupations regardless of initial choices.

Yet all three of these issues are important in terms of other issues raised in the literature. The selection of specific occupations is important for understanding the status attainment processes outlined above. Studying field of study is important given the connection between fields and subsequent occupations and given the important socialization effect location in a given college department and major has. Feldman and Newcomb (1969) observe that departments are a type of "home" to students. College departments vary along various organizational and social dimensions, and these variations affect the occupational and other outcomes for students, primarily through the socialization experiences such departments offer (Hearn, 1980; Vreeland and Bidwell, 1966; Weidman, 1979). Both Wilson (1978) and Griffin and Alexander (1978) present evidence that majors differ substantially in their later economic and occupational outcomes. Cebula and Lopes (1982) found that expected future earnings, and particularly the changes in earning differentials, contribute considerably to selection of major. Milley and Bee (1982) found selection of major to be related to such factors as reputation and status of the department, as well as difficulty of major and ease in finding employment. Hearn and Olzak (1981) present evidence showing how college major contributes to the reproduction of sexual inequality. But, as they also observe (1981:195), little is known about how students of different backgrounds choose majors.

Studying the successful pursuit of occupation and field represents a somewhat different dependent variable than is customarily found in the literature. Instead of developing predictors of attaining high status occupations, this approach instead focuses on the congruency between expectations and attainment. The focus becomes the actual pursuit instead of the status of the occupation or field selected (cf. Wagenaar, 1981). The closest parallel work in the literature is a study by Bogie (1976), who examined the deflection between aspirations and expectations. He found that such deflection was moderately high. For example, about 60% of those with aspirations for professional occupations actually expected to enter such occupations. The key predictor of deflection was SES. However, his study relied on cross-sectional data and therefore allows no test of the discrepancy between aspirations and actual attainment.

Background Variables

Socioeconomic status The most researched background variable is SES. This variable has been extensively examined by the status attainment researchers as well as by a variety of other researchers. It has been found to be the key predictor of a variety of outcome variables (Levine, 1976). In fact, Dillard and Perrin (1980) conclude that, controlling for ethnicity and sex, SES remains the best predictor of expected career choices. SES directly and indirectly affects the nature of the socialization adolescents experience (Boocock, 1980). Early socialization within higher SES families is more participative than repressive, stressing autonomy and self-concept development. Achievement in such families is a highly valued goal, and SES is linked with the teaching of skills and values requisite for the attainment of goals.

SES is also important for its linkage with a large number of intervening variables between family background and occupational attainment. Most notably, it significantly predicts intelligence (Jencks, 1972; Sewell, et al., 1969). SES is also substantively related to academic achievement (Lavin, 1965), and SES and intelligence together account for the majority of the differences in academic achievement (Rossi, 1961). Another well-documented finding is the linkage of SES with both educational aspirations and attainment (Jencks, 1979; Hauser, et al., 1983). Other factors influenced by SES include the influences of significant others, curriculum placement, type of school attended, coursework, and such social-psychological variables as locus of control and self-concept (Ballantine, 1983; Boocock, 1980; Levine, 1976). Particularly important for this study is the linkage between SES and such factors as knowledge of occupations, knowledge about the steps required to attain educational and occupational goals, and the implementation of educational and occupational plans; researchers have typically found positive relationships between SES and each of these factors (Bogie, 1976; Ellis and Lane, 1963; Nolfi, 1979; Timperley and Gregory, 1974). Based on this literature, SES is expected to be positively related to the selection of higher prestige occupations and fields leading to these occupations, as well as to successful pursuit of both occupational plans and intended field of study.

Race Race has also been linked with educational and occupational achievement. The results increasingly show that minorities do not differ substantially from whites in aspirations, although differences in attainment remain substantial (Dillard and Perrin, 1980; Garrison, 1982; Rosenthal, Putnam, and Hansen, 1979; Rumberger, 1982; Shapiro and Crowley, 1982; Trent, 1983). Also, race is linked with such factors as curriculum placement, educational counseling, type of school attended, and coursework (Boocock, 1980; Jones, Erickson, and Crowell, 1972; West and Shearon, 1982).

Several specific findings exist. Shapiro and Crowley (1982) found that both blacks and Hispanics expect to attain primarily blue collar occupations. Milley and Bee (1982) found that blacks are more likely to feel that a major is important for entry into the job market and therefore are more likely to consider the difficulty of a degree or major. Hager and Elton (1971) found that black males expressed more interest in social service occupations and less interest in the physical sciences, while over a decade later Trent (1983) noted declining minority interest in the social sciences and education and increasing interest in mathematics and science. Rumberger (1982) found that blacks were more likely to major in business, while whites were more likely to major in engineering and the humanities.

Other research questions the common combination of all ethnic groups into a "non-white" category. For example, Kuvlesky, Wright, and Juarez (1971) found that whites had the closest "fit" between aspirations and expectations and that Hispanics felt the least sure of attaining their goals, even though the goals were the most important to them. Trent (1983) found a basic similarity for whites and Hispanics in the rank order of important fields, while the results for blacks were different. Dillard and Perrin (1980) found no differences between blacks and Hispanics or between whites and Hispanics on career maturity, although whites showed greater maturity than blacks. In short, such studies underscore the importance of examining blacks and Hispanics separately. The results suggest clear differences in selection of occupation and field of study as well as in rates of successful pursuit.

Sex Recent years have seen a substantial increase in the number of studies comparing men and women, although many of the classical studies included only males (e.g., Blau and Duncan, 1967; Sewell, et al., 1969). The major conclusion of most of these more recent studies is that the sex gap in both occupations and fields has narrowed considerably, although distinct differences still remain (Blau and Hendricks, 1979; Cook, 1981; Garrison, 1979; Regan and Roland, 1982; Rumberger, 1982; Shapiro and Crowley, 1982; Trent, 1983). Similarly, the percentage of females indicating that a career would be the most important source of life satisfaction doubled between 1970 and 1980, while the percentage of males with this orientation has declined (Regan and Roland, 1982).

A variety of specific findings emerge in these and other studies. Garrison (1979) found the direct effects of sex to be greater than those for SES, class quartile, residential location, and cohort, although the relationship of sex to aspirations weakens across cohorts. While females are still more likely to major in education, health, speech-drama, and fine arts, they have made substantial progress in selecting such fields as the professions, engineering, and crafts (Polachek, 1978; Shapiro and Crowley, 1982; Trent, 1983). Such differences stand up with controls for ability, family background, and future labor market activity (Peng and Jaffe, 1979).

In a study of women pursuing a traditional field (home economics) versus a nontraditional field (engineering), Yanico and Hardin (1981) found persistence in both categories to be related to mathematics scores. Goodale and Hall (1976) found that women were more independent of family background and values and less likely to inherit the career attainments of their parents. Cook (1981) found that males select investigative and enterprising occupations while females select social occupations, and that over 90% of the males chose occupations that employed more males than females, while females endorsed male and female-dominated occupations nearly equally. Furthermore, females continue to expect to enter female-dominated occupations to a greater extent than they wish to; they generally do not realize their potential to the same extent as do men (Card, Steel, and Abeles, 1980; Davis, Gaa, and Baptiste, 1982; Lueptow, 1982). In short, a narrowing of the sex gap has occurred over the last decade, but substantial differences still exist.

Various explanatory factors have been suggested for these differences. Socialization across the life cycle has been the dominant explanatory factor. The influence of early role models is critical (Ridgeway, 1978), and modeling and reinforcement are both relevant (Krumboltz, Mitchell, and Jones, 1976). Similarly, the sex role ideology developed as a result of these socialization experiences is relevant (Lyson and Brown, 1982). Another explanatory factor is academic performance; higher performance on the part of women is related to selecting nontraditional occupations and fields (Carney and Morgan, 1981). Similarly, curriculum selections are connected with selecting traditional or nontraditional occupations and fields for women (Rumberger, 1982). In summary, these studies suggest noticeable changes in selection of occupation and field of study over the 1972 - 1980 time period, as well as somewhat lower successful pursuit rates for women.

Aptitude Intelligence has been a key variable in most status attainment models. Intelligence tests represent the most substantively developed and most studied construct studied by psychologists (Levine, 1966). Intelligence is related to both educational and occupational aspirations as well as to academic performance (Gasson, Haller, and Sewell, 1972; Jencks, 1972). Intelligence also predicts selection of high status occupations as well as educational attainment (Davis, 1965; Sewell and Shah, 1967), although Nolfi (1979) found ability to have minimal impact on career expectations or job success. Intelligence is also positively related to occupational knowledge (Guerra, 1973). On the basis of these studies, a positive relationship between aptitude and selection of higher status occupations and fields is expected, as is a positive relationship with successful pursuit of both occupation and intended field of study.

Other Personal Variables

Although few analysts have specifically examined predictors of selection of specific occupations and fields, as well as successful pursuit, the variables reviewed above represent the bulk of the variables examined in this literature. Yet other factors may also be relevant. Self-concept has been widely examined as an important social-psychological variable (Boocock, 1980; Rosenberg, 1965). Super (1957) found that self-concept influences career choice. These and other researchers typically find that self-concept predicts various outcome measures of success since a strong self-concept enables individuals to attain their goals in the face of both personal and structural obstacles. Similarly, locus of control has been found to influence successful pursuit since success seems to be predicated on a belief that one has a certain degree of control over one's personal environment, i.e., high internality (Burlin, 1976; Lefcourt, 1966). Hence, both self-concept and locus of control may be expected to positively affect both choice of occupational and field of study status as well as successful pursuit of occupation and field of study.

Significant others also play an important role in status attainment, as seen in the review of the Wisconsin model above. Significant others influence the future plans of adolescents and provide both the support and the feedback necessary for a more accurate appraisal of personal goals and strengths (Brookover and Erickson, 1975). The major significant others for adolescents are parents, teachers, and peers, and to a lesser extent, counselors. The literature shows clearly that the school personnel have less influence than parents and peers. This literature also refutes the common assertion that the expectations of parents and peers are usually in conflict. In fact, parents seem to retain the bulk of the influence through high school, although there is some content specialization as well as some overlap (Brookover and Erickson, 1975:304 - 309). Parents help shape values, they provide role models, and they provide the resources and encouragement adolescents need to articulate their own goals (Gasson, Haller, and Sewell, 1972; Super, 1957; Taylor, 1968). Parental influence is particularly critical for the selection of college majors among women. For example, Weishaar, Green, and Craighead (1981) found that females in nontraditional majors were much more influenced by their fathers while females in traditional majors were much more influenced by their mothers.

Blau, et al. (1956) observe that counselors can provide occupational information and can influence the work values of high school students, and Weishaar, et al. (1981) found that high school teachers were second only to fathers in their influence on selection of college major. Both Esslinger (1976) and Bain and Fottler (1978) found that teachers were more influential than counselors, although neither of these school personnel had as much influence as did parents and friends. Hence, the influence of parents, teachers, and counselors can be expected to positively influence successful pursuit; the role of peers in this regard is less clear. Similarly, the literature shows an effect of parental and school personnel influence on college major selection, although the specific linkages are not clear.

Values The values adolescents hold are a product of both socialization and life experiences and play an important role in the development and attainment of their occupational and educational goals. In fact, the acquisition of certain values is necessary in order to articulate one's plan of action (Ballantine, 1983). Two types of values will be examined: general values (the importance of work and money) and specific factors that influenced occupational selection (e.g., job security, autonomy). Kapes and Strickler (1975) found the importance of money and the opportunity to perform interesting work to be two key values in occupational selection; they also noted the intensification of occupationally relevant values over the high school years. Polachek (1978) noted a distinct connection between values and occupational and field of study selection. For example, those who emphasized money tended to major in business while those more concerned about their social development tended to major in the social sciences. Berger and Blum (1978) found sex differences in the connection between values and occupational selection, with men higher on the need for money and power and women higher on social service; similar differences are noted by Herzog (1983). While the connection between each of the six occupational values to be analyzed and selection of occupation and field of study is not entirely clear, previous research indicates that such connections can be expected.

Family and work expectations and experiences Family formation notably affects occupational attainment, and to a lesser extent occupational aspirations, especially for women (Treiman and Terrell, 1975; Waite and Moore, 1978). This connection is due to the fact that family often competes with occupation for the central role and time of young adults, particularly women (cf. Chillman, 1978; Otto, 1979). Using a longitudinal design, Howell and Frese (1982) found negative effects of both early marriage and parenting on occupational attainment, although the effects were not as severe as those of dropping out of high school. However, they found occupational aspirations to be negligibly affected by these accelerated role transitions. Klemmack and Edwards (1973) found that the degree of femininity of the selected occupation is related to anticipated marriage age and family size; the earlier the anticipated marriage and the larger the anticipated family, the more feminine the selected occupation. Hofferth and Moore (1979) observe that the major intervening variables between family formation and restricted occupational attainment is the lack of income and subsequent reduced educational attainment. Therefore, both marriage and parenting expectations and experiences are expected to negatively affect successful pursuit, and they are expected to reduce the likelihood of selecting high status occupations and fields.

Work experiences affect the work orientations and future labor market involvement of adolescents, particularly for those entering the labor market directly from high school ("After-school Jobs..., 1983). Also, Parnes and Kohen (1975) found labor market experience to influence the amount and sources of occupational information as well as subsequent occupational choices. Similarly, early work experience after high school affects later occupational selection and attainment (Gottfredson and Brown, 1981). Therefore, work experience both in high school and in the first few years after high school can be expected to affect occupational and field of study selection as well as successful pursuit of both occupation and field.

School Experiences

The literature is particularly weak in depicting relationships between school experiences and occupational and field of study selection as well between such experiences and successful pursuit. Yet it seems plausible that the nature of high school experiences would affect such outcomes, although it is not clear whether such experiences have effects themselves or as part of their connection with other personal characteristics. For example, academic performance and coursework might be expected to influence choice of occupation and field of study, such as the connection between high grades and science coursework with selection of a professional occupation or field of study. But such choices are also dependent on aptitude and SES, which themselves may influence academic performance and coursework completed. However, On the basis of a literature review, O'Neill (1978) concluded that there is little consensus regarding the strength and direction of the effects of school contexts. O'Neill's study further documented the relatively minimal effects of school contexts on aspirations.

Several school experiences will be examined. Academic performance has been found to be linked to occupational choice, with higher performing students selecting higher status occupations (Esslinger, 1976). Also, Slocum (1956) found grades to predict decisions to attend college, and Milley and Bee (1982) review research showing a link between grades and selection of college major. Similarly, Gottfredson and Brown (1981) found the academic achievement dimension to most clearly discriminate among the various Holland occupational categories. In addition to grades, amount of homework completed and absenteeism will be used as indicators of academic commitment.

Curriculum appears to be linked to occupational knowledge (Guerra, 1973), an indirect linkage to occupational and field of study selection, as well as to actual choices (Esslinger, 1976). While Herr, Goode, McCloskey, and Weitz (1982) conclude that curriculum has never been seriously examined, Marjoribanks (1981) argues that curriculum location has a potent effect on socialization experiences, thereby also indirectly affecting occupational and field of study selections. Anilfoff (1976) found that academic curriculum students had higher higher self-concept and found that, while little relationship existed between curriculum and occupational aspirations, substantial relationships occurred between curriculum and occupational expectations. Again, the general trend is for academic curriculum students to select the higher status occupations and fields. Also, Herr, et al. (1982) found that academic curriculum students were more certain about their occupational choices, suggesting that curriculum may also be linked to successful pursuit.

Various coursework variables will also be examined since actual coursework may be more relevant than curriculum location. Counseling services may also be important. Counselors are frequently important significant others for adolescents (see above), and the provision of specific educational and employment counseling may actually influence occupational and field of study selection in that counselors may help clarify the alternatives for students. Counselors may play a key role simply by providing appropriate sources of information (Fottler and Bain, 1980; Timperley and Gregory, 1974).

School activities reflect the integration of the student into the school structure, and may therefore influence both self-concept and social skills; both of these are closely connected with future choices. Finally, assessments of high school services may be related to selection and successful pursuit. With identical schools, students more pleased with services may be more prone to select particular occupations and fields.

In summary, three types of variables will be examined for their impact on occupational and field of study selection, as well as on successful pursuit: background variables, other personal variables, and school experiences variables. The literature is clearest on the impact of the background variables, and somewhat less clear on the role of the other personal characteristics variables and the school experiences variables.

Preview

The next chapter outlines the methods used in the study. The sampling procedures for the two studies are compared, the construction of the field of study and occupational plans categories are reviewed, the operationalization of the variables for each research issue are presented, and the analysis procedures for each research issue are discussed. Chapter 3 reviews the results for the first research issue, Chapter 4 reviews the results for the second research issue, and Chapter 5 reviews the results for the third research issue; each chapter is organized around the subtopics per research issue. Chapter 6 contains a summary of the results as well as a discussion of the policy implications.

CHAPTER 2

Methods

The preceding chapter outlined the theoretical and policy rationale for the study and placed many of the variables used within the context of the literature. The following chapter is the first analysis chapter, presenting the results for Research Issue 1. This chapter describes the methods used in the study. The sampling designs for each of the two data sets are described first, along with a description of the weights used. Occupational plans and intended field of study are two of the key dependent variables and are discussed in detail. The variables used in each research issue, along with their measurement procedures, are presented next. Finally, the analysis procedures used in each research issue are presented. First, then, the sampling procedures, which are described first for NLS and then for HS&B.

Sampling Procedures

National Longitudinal Study

The sample design for NLS was a stratified, two-stage probability sample of students from all schools, public and private, in the 50 states and the District of Columbia, which contained twelfth graders during the 1971-72 school year. The study excluded students from schools for the physically or mentally handicapped, those for legally confined students, and in special situations (such as area vocational schools) where students were also enrolled in other high schools in the sampling frame. Base-year data were collected in 1972, and follow-ups occurred in 1973, 1974, 1976, and 1979.

The first-stage school sampling frame was constructed from computerized school files maintained by the Office of Education and the National Catholic Education Association. It was divided into 600 final strata based on: 1) type of control (public or private), 2) geographic region, 3) grade 12 enrollment, 4) proximity to institutions of higher learning, 5) percent minority group enrollment, 6) income level of the community, and 7) degree of urbanization. Schools were selected with probabilities proportional to the estimated number of seniors in the smallest strata (fewer than 300 seniors); schools were selected with equal probabilities in the remaining strata. The potential for including disadvantaged students was increased by sampling schools in low-income areas and schools with a high proportion of minority group enrollment at twice the rate used for the remaining schools. Four schools were selected within each final stratum, and two of the four were randomly designated as the primary selections; the other two schools were retained as substitute or backup schools.

The second stage of the sampling procedure consisted of first drawing a simple random sample of 18 seniors per school (or all if fewer than 18 were available) and then selecting five additional students (if available) as replacements. Seniors were sampled with equal probabilities without replacement. Early (i.e., mid-year) graduates and those attending adult education classes were excluded.

Only 948 of the 1,200 primary sample schools participated in the base-year survey. Resurvey activities prior to the first follow-up were successful in 205 of the 231 primary sample schools which either refused to participate or could not participate because the request was received too late in the school year. Hence, seniors from 1,153 of the 1,200 primary sample schools were included in the first and subsequent follow-ups. The final sample for follow-up surveys was increased to 1,318 schools through the use of backup schools and 16 sample augmentation schools.

The total number of records in NLS is 22,652. Research Issue 1 used only base-year data, although some variables with missing data in this wave (e.g., sex, high school program) were obtained from follow-up data. Research Issue 2 relied primarily on base-year and third and fourth follow-up data (Research Issue 3 used only HS&B data). Base-year data are available for 16,683 seniors; school-record data are available for 21,738; test data are available for 15,860; fourth follow-up data are available for 18,630; and base-year and fourth follow-up data are available for 13,847. The proportion of missing data per variable will vary in terms of individual response patterns and the availability of replacement data from other waves.

Unadjusted student weights, the inverses of sample inclusion probabilities, were calculated for all students sampled. These weights are a function of the school selection probabilities and the student selection probabilities within school. Several sets of adjusted weights were computed because of the various sample redefinitions and augmentations and nonresponse to the various student instruments. Adjustments were made only for instrument nonresponse and not for item nonresponse.

A weighting class approach was used, which distributes the weights of nonrespondents to respondents who are most like them (i.e., in the same weighting class). The adjustment procedure involved partitioning the entire sample into weighting classes on the basis of high school program, race, grades, parents' education, and sex. Differential response rates for students in different weighting classes are reflected in the adjustment, and the weight total within each weighting class (and thus for the sample as a whole) is maintained. Weight 1, respondents to base-year student questionnaire, was used in Research Issue 1; weight 22, respondents to base-year student questionnaire and Fourth Follow-Up key questionnaire items, was used in Reseach Issue 2. Further details on the weighting procedures and limitations can be found in Appendix G of the Users Manual. Next the HS&B sampling procedures are described.

High School and Beyond

HS&B is a national longitudinal study of the cohorts of 1980 high school seniors and sophomores in the United States; only seniors were used in this study. Students were selected through a two-stage probability sample with schools as the first stage unit and students as the second stage unit. With the exception of special strata, schools were selected with probability proportional to estimated enrollment; 36 seniors were randomly selected per school. All eligible seniors were drawn in the sample in those schools with fewer than 36 seniors.

The sample as designated contained 1,122 schools from a frame of 26,095 schools with grades 10 or 12 or both. The sampling frame was obtained from the 1978 list of U.S. elementary and secondary schools of the Curriculum Information Center, a private firm. This list was suppplemented by NCES lists of public and private elementary and secondary schools. Catholic and public schools were part of the regular strata; the Catholic schools were stratified by region and the public schools were stratified by region, racial composition, enrollment, and central-city/suburban/rural. The following special strata were oversampled to allow a sufficient number of cases for subgroup analyses: alternative schools, public Cuban Hispanic, Catholic Cuban Hispanic, other Hispanic, private high performance, other private non-Catholic, and Black Catholic.

Of the original sample, 811 schools participated. Hence, 204 substitution schools were added; substitution was carried out only within strata. No substitution occurred for students whose parents refused, who themselves refused, or who were absent on survey day and make-up day. The sample as realized involved 1,015 schools and 28,240 seniors.

Weights have been introduced for schools and for students, which give each school or each student a weight equal to the number of schools or students in the universe of schools or students which that school or student represents. Weights for schools were computed as the product of three factors. Factor one was the inverse of the probability of selection for the school under the assumption that it was part of the initial set of selections. Factor two was the estimated proportion of schools in the stratum which were "out of scope." This factor was used in order to compensate for the fact that the design specified that replacement selections were to be made for schools of this type. The third factor involved the ratio of the number of initially selected schools in each stratum to the final "in sample" schools from the stratum. This factor was employed to compensate for the differential cooperation rates (at the school level) across the various strata, and to adjust the total sample projections to reflect the total frame rather than only cooperating schools.

Weights for students consist of the product of the school weight and a within-school student weight. The within-school student weight consists of the number of students in the class represented by this student (the inverse of the probability of being drawn), times the ratio of the number of students sampled in that school divided by the number for whom questionnaire data were obtained. As is the case of the school weight, the second stage weight involves two underlying factors, compensation for overall and differential selection probabilities with respect to the initially selected sample, and adjustment for bias components induced by differential response rates. The student weight is the estimated number of students in grade 12 of American high schools represented by the student on whose record the weight appears. The weighting variable employed was "DESIGNWT." Further information on sampling and weighting can be found in the Infomation for Users manual.

Occupational Plans and Intended Field of Study

Clear identification of the planned occupation and intended field of study is critical for this study since both are major outcome variables. The goal was to develop measures that were not so detailed that they included virtually every occupation or field, and also to develop measures that were not so broad that they precluded effective analyses. Furthermore, the measures for both occupation and field of study needed to be comparable across the two data sets. Establishing comparability between NLS and HS&B on both the intended field of study and occupational plans variables was difficult because the items were phrased differently and employed somewhat different response categories in the two studies. In addition, the intended field of study questions were asked of a more restricted group in NLS; details on the differences and how they were handled are noted below. First the construction of the occupational plans and field of study variables are reviewed.

Occupational Plans

Regarding occupational plans, NLS used "the kind of work you would like to do," while HS&B used "the job or occupation that you expect or plan to have when you are 30 years old." The first stresses aspirations while the second stresses plans. The NLS variable (BQ25A) contained only one "professional" category, including teaching, while the HS&B variable (BB062) contained two "professional" categories and a separate category of "school teacher." NLS also used a category "homemaker or housewife," while HS&B used "homemaker or housewife only." Finally, HS&B used a "not working" category, while NLS did not.

The occupational plans categories in both NLS and HS&B were collapsed to reflect issues of policy relevance, to adjust for varying numbers of responses per category, and to make the analyses easier to conduct. For example, few policy issues pertain to separating the various service or clerical/sales categories, while greater policy relevance pertains to the professional categories. The approximate skill level required as well as the numbers of respondents per category were used to reclassify the occupational plans variable into the following categories for both cohorts:

1. Professional 2 (advanced degree)
2. Professional 1
3. Technical
4. Teacher
5. Manager/Proprietor
6. Craftsman/Operative
7. Clerical/Sales
8. Service
9. Farmer/Laborer
10. Military
11. Housewife

Due to the difficulties noted above, BQ96 ("What kind of work do you plan to go into?") was used instead of BQ25A in NLS. BQ96 was an open-ended question with responses coded to the list of occupational codes found in Appendix C.1 of the User's Manual. Using this item has two advantages over using BQ25A. First, it is more like the HS&B variable in that plans are stressed over aspirations, and second, the complete list of occupational codes allows more accurate recoding so that greater comparability with the HS&B categories exists.

BQ96 was recoded so that the Professional 2 category includes judges, lawyers, mathematical specialists, life and physical scientists, physicians and dentists and related practitioners, clergymen, social scientists, and college teachers (see Appendix 1 for a list of the codes for each category). The Professional 1 category includes accountants, architects, engineers, farm and home management advisors, foresters and conservationists, librarians and archivists and curators, operations and systems researchers and analysts, personnel and labor relations workers, nurses and dietitians and therapists, religous workers, social workers, recreation workers, vocational and educational counselors, writers and artists and entertainers, and research workers.

The Technical category includes computer specialists, health technologists and technicians, and engineering and science technicians. The Teacher category includes elementary and secondary teachers, but not college and university teachers. The Manager/Proprietor category includes various managers and administrators (except farm). The Craftsman/Operative category includes various craftsmen and kindred workers and operatives (including transport). The Clerical/Sales category includes sales workers and clerical and kindred workers. The Service category includes cleaning, food service, health service, personal service, protective service, and private household workers. The Farmer/Laborer category includes various farm and non-farm laborers. Military and Housewife each have their own single digit codes.

The HS&B occupational plans item was BB062, which asked students to write in "the name of the job or occupation that you expect or plan to have when you are 30 years old." They were also asked to identify from a list of 16 categories the one that "comes closest to describing that job." These categories were collapsed to the categories noted above. The Professional 2 category includes response 10, "professional, such as clergyman, dentist, physician, lawyer, scientist, college teacher." The Professional 1 category includes response 9, "professional, such as accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including school teacher." The Technical category includes response 16, "technical, such as draftsman, medical or dental technician, computer programmer." The Teacher category includes response 14, "school teacher, such as elementary or secondary." The Manager/Proprietor category includes response 6, "manager, administrator, such as sales manager, office manager, school administrator, buyer, restaurant manager, government official," and response 11, "proprietor or owner, such as owner of a small business, contractor, restaurant owner."

The Craftsman/Operative category includes response 2, "craftsman, such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter," and response 8, "operative, such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver." The Clerical/Sales category includes response 1, "clerical, such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent," and response 13, "sales, such as salesperson, advertising or insurance agent, real estate broker." The Service category includes response 12, "protective service, such as detective, police officer or guard, sheriff, fire fighter," and response 15, "service, such as barber, beautician, practical nurse, private household worker, janitor, waiter." The Farmer/Laborer category includes response 3, "farmer, farm manager" and response 5, "laborer, such as construction worker, car washer, sanitary worker, farm laborer." The Military category includes response 7, "military, such as career officer, enlisted man or woman in the Armed Forces." The Housewife category includes response 4, "homemaker or housewife only." The "not working" response, selected by 354 seniors, was recoded as missing so that it is approximately comparable to the NLS "legitimate skip" and "blank" categories.

Intended Field of Study

The wording of the two intended field of study variables differed somewhat. NLS asked seniors to identify their "first choice," while HS&B asked seniors to identify "the field that comes closest to what you would most like to study in college." This difference should not substantially affect the results. The NLS categories "black studies" and "journalism" were renamed to "ethnic studies" and "communications" in HS&B. These differences are minimal, particularly when the descriptive phrases with each category are considered. The NLS category "health related" was divided into "health occupations" and "health sciences" in HS&B. Predentistry and premedicine were placed in "biological sciences" and prelaw was placed in "social sciences" in NLS, while HS&B created created a new "preprofessional" category for these three choices. HS&B contains an "other" category while NLS did not. Finally, different skip patterns were used in the two studies on this variable. For NLS, any senior who planned to attend college in the year following high school answered the field of study question; for HS&B, any senior who planned to go to college sometime in the future (including "don't know's") answered the field of study item. This discrepancy was handled by simply using only those HS&B seniors who planned to attend college the year after high school.

The field of study categories were collapsed to reflect issues of policy relevance, to adjust for varying numbers of respondents per category, and to make the analyses easier to conduct. For example, few policy issues pertain to separating the various humanities categories, while greater policy relevance pertains to such fields as education and business. Hence, the intended field of study variable was collapsed into the following categories for both cohorts:

1. Preprofessional
2. Humanities/Arts
3. Education
4. Business
5. Social Science
6. Biology/Physical Science/Mathematics
7. Computer/Engineering/Architecture
8. Agriculture/Home Economics/Vocational
9. Health

Item BQ69A was used in NLS to measure intended field of study. This item asked students to select one category to indicate their first choice "for your present choices among certain field of study in college." The Preprofessional category includes those who selected response 4, "biological sciences," and were located in the "Professional 2 (advance degree)" category in the occupational plans variable described above; this procedure was designed to select out of the "biological sciences" response primarily those interested in premedicine and predentistry. The preprofessional intended field of study category also includes those who selected response 20, "social sciences," and were located in the "Professional 2 (advanced degree)" category in the occupational plans variable described above. This procedure was designed to select out of the "social sciences" response primarily those interested in prelaw. The rationale for this action is the close agreement between preprofessional field choice and advanced professional occupational choice in HS&B.

The Humanities/Arts category includes responses 3 ("art"), 5 ("black studies"), 10 ("English"), 11 ("foreign languages"), 14 ("interdisciplinary studies"), 15 ("journalism"), 17 ("music"), and 18 ("philosophy or religion"). The Education category includes response 8, "education." The Business category includes response 6, "business." The Social Science category includes response 20, "social sciences" (except prelaw--see above). The Biology/Physical Science/Mathematics category includes responses 4 ("biological sciences," except premedicine and predentistry--see above), 16 ("mathematics"), and 19 ("physical science"). The Computer/Engineering/Architecture category includes responses 2 ("architecture"), 7 ("computer and information sciences"), and 9 ("engineering"). The Agriculture/Home Economics/Vocationalcategory includes responses 1 ("agriculture"), 13 ("home economics"), and 21 ("vocational or technical"). The Health category includes rsponse 12 ("health-related careers").

The HS&B item used to indicate intended field of study was BB120, which asked students to "indicate the field of study that comes closest to what you would most like to study in college." The Preprofessional category includes response 21 ("preprofessional"). The Humanities/Arts category includes responses 3 ("art"), 6 ("communications"), 10 ("English"), 11 ("ethnic studies"), 12 ("foreign languages"), 16 ("interdisciplinary studies"), 18 ("music"), and 19 ("philosophy or religion"). The Education category includes response 8 ("education"). The Business category includes response 5 ("business"). The Social Science category includes responses 22 ("psychology") and 23 ("social sciences"). The Biology/Physical Science/Mathematics category includes responses 4 ("biological sciences"), 17 ("mathematics"), and 20 ("physical science"). The Computer/Engineering/Architecture category includes responses 2 ("architecture"), 7 ("computer and information sciences"), and 9 ("engineering"). The Agriculture/Home Economics/Vocational category includes responses 1 ("agriculture"), 15 ("home economics"), and 24 ("vocational or technical"). The Health category includes responses

13 ("health occupations") and 14 ("health sciences"). Response 25, "other," was defined as missing to resemble the NLS categories of "legitimate skip" and "blank".

The differential skip patterns associated with the intended field of study variables were noted above. Comparability was established by using the NLS data without modification since only those planning to attend college the year after high school answered the field of study question. Item BB015, "Do you plan to go to college at some time in the future?" was used to select only those HS&B seniors who selected, "Yes, next year" (response 1).

Variables Used in Research Issue 1

Several categories of variables were employed in the three research issues. Personal background variables includes primarily such demographic variables as sex and SES. All variables pertaining to school experiences comprise a second category. The third category includes other individual variables, such as orientations and values (including family formation expectations) as well as the role of significant others. The rationale for using these categories was outlined in the first chapter; the major reason is that the literature suggests that such factors would be relevant for an understanding of the occupational and field of study choices of adolescents. The variables used in Research Issue 1 are described first; additional variables or other changes are then described for Research Issues 2 and 3.

Personal Background Variables

In NLS, sex is a composite measure based on various indicators gathered during the different waves of data-gathering ("CSEX"). As a result, only 43 cases have missing data for this variable in NLS. In HS&B, sex was measured with BB083; unfortunately, 1,247 cases do have missing data. Sex was dummy coded such that 1 = female and 0 = male.

In NLS, race is a composite measure based on various indicators gathered during the different waves of data-gathering ("CRACE"). The categories "Mexican American," "Puerto Rican," and "Latin American" were collapsed to "Hispanic." Two other categories, "white" and "black," were used as found, and the remaining categories were defined as missing. In HS&B, race was measured with BB089 ("Race") and BB090 ("Origin or descent"). BB090 was used first to select all Hispanics, and then blacks and whites were selected via BB089. Hence, the race variable contains three categories: "Hispanic," "black," and "white." Two dummy variables ("Hispanic" and "black") were constructed for use in the regression analyses (1 = Hispanic, black; 0 = white).

For both NLS and HS&B, socioeconomic status (SES, BBSESRAW) was measured by an equally weighted linear composite of father's education, mother's education, father's occupation, family income, and several household possession items. The education and income variables were first rescaled to enhance comparability and strengthen the interval nature of the data. Census Bureau codes for father's occupation were mapped into Duncan SEI scores. Household possessions used by both NLS and HS&B include a daily newspaper, encyclopedia, typewriter, electric dishwasher, and two cars/trucks. Possessions used only in NLS include dictionary, magazines, record player, tape recorder, and color television, and possessions used only in HS&B include more than 50 books, a room "of your own," and a pocket calulator. These items were standardized; these standard scores were summed over the non-missing items; and this sum was divided by the number of non-missing items. Subgroup means were computed on the above five SES components; subgroups were defined on the basis of race, high school program, and aptitude. These subgroup means were substituted for the missing SES components. The five variables were standardized and summed over the non-missing components, and the sums were divided by the number of non-missing components.

Aptitude was constructed in both samples by summing the standardized vocabulary, reading, and mathematics scores, and dividing this sum by the number of non-missing scores.

School Related Variables

In NLS, high school program was constructed from a composite index based on various indicators gathered during the different years of data-gathering ("HSPGM"). The comparable measure in HS&B is BB002. Both measures include the following categories: general, academic, and vocational. For the regresssion analyses, a dummy variable was created; 0 = general and vocational, 1 = academic.

The Grades variable was recoded from BQ5 in NLS and from BB007 in HS&B. The combined percentage in the "mostly A" and "about half A and half B" categories was used as the focal category. For the regression analyses, a GPA equivalent measure was constructed, with "mostly A" = 4.0, "about half A and half B" = 3.5, "mostly B = 3.0, "about half B and half C" = 2.5, "mostly C" = 2.0, "about half C and half D" = 1.5, "mostly D" = 1.0, and "mostly below D" = .5.

Data on coursework were gathered differently. In NLS, these data were gathered from students' school records, while in HS&B these data were supplied by the students themselves. Undoubtedly, the NLS data are somewhat more reliable and valid, although there is little reason to believe that the HS&B students systematically biased their responses. Also, the categories differed across the two studies. NLS recorded the total number of semesters and also the number of class periods per week, while HS&B recorded the data in one-half year increments, which generally correspond to semesters. Hence, the "total number of semesters of instruction" values were used in NLS for coursework in science (SRFQ4A), foreign languages (SRFQ4H), English (SRFQ4V), and mathematics (SRFQ4CC). The total number of years (measured in half-years, i.e., semesters) were used in HS&B for coursework in science (EB004G), foreign languages (EB004C, D, and E), English (EB004B), and mathematics (EB004A).

The three foreign language items (French, German, and Spanish) were each defined as missing if all three had missing values or in the case of refusal or multiple punches. If one of the foreign language items was missing while the others were not, that language item was given a value of 0. The three foreign language items were then summed. The largest category in the HS&B coursework items was "more than 3 years;" this item had a value of 7 (i.e., 7 semesters). Hence, all values in the NLS coursework items that were above 7 were recoded to 7 to establish comparability.

Two types of counseling resources were also examined. Educational counseling was measured by the item, "School provided me with counseling that will help me continue my education" (BQ19F, EB035D), and employment counseling was measured by the item, "School provided me with counseling that will help me find employment" (BQ19I, EB035E). The items were the same for both NLS and HS&B, and the Likert-type responses were dummy coded to 0 = "disagree" and " does not apply," and 1 = "agree."

Orientations and Values

Scales were constructed to measure self-concept and locus of control. Self-concept was measured with the following items (the procedures were the same for both NLS and HS&B):

1. I take a positive attitude toward myself (BQ21A, BB058A))
2. I feel I am a person of worth, on an equal plane with others (BQ21C, BB058C)
3. I am able to do things as well as most other people (BQ21D, BB058D)
4. On the whole, I'm satisfied with myself (BQ21H, BB058H)

The responses were recoded to the following values: 1) disagree strongly, 2)disagree, 3) no opinion, 4) agree, and 5) agree strongly. Hence, higher values reflect higher levels of self-concept. Standard scores were then calculated for each of the items; these standard scores were then summed and this sum was divided by the number of non-missing values.

Locus of control was measured with the following items (the procedures were the same for both NLS and HS&B):

1. Good luck is more important than hard work for success (BQ21B, BB058B)
2. Every time I try to get ahead, something or somebody stops me (BQ21E, BB058E)
3. Planning only makes a person unhappy since plans hardly ever work out anyway (BQ21F, BB058F)
4. People who accept their condition in life are happier than those who try to change things (BQ21G, BB058G)

The scoring procedures were similar to those noted above for self-concept, except that the categories were not reversed. Higher scores reflect a higher level of internality.

Two values held by seniors were also included. Importance of work was measured by asking respondents how important "being successful in my line of work" is (BQ20A, BB057A). Importance of money was measured by asking respondents how important "having lots of money" is (BQ20C, BB057C). Both variables were recoded to a dummy variable such that 0 = "not important" or "somewhat important," and 1 = "very important."

Influence of Significant Others

The roles of three significant others for post-high school plans were also incorporated. Parental influence was measured in NLS by asking how much "your parents have influenced your plans for after high school (BQ14A). In HS&B, this variable was measured with two items phrased the same way, except asking about "your father" (BB049A) and "your mother" (BB049B). Comparability was established by taking the mean of the two parental values in HS&B; if one of the two items was missing, the other item was used.

Counselor influence was measured in both samples by asking how much "a guidance counselor influenced your plans for after high school" (BQ14C, EB049C). Teacher influence was measured in NLS by asking how much "a teacher other than a guidance counselor influence your plans for after high school" (BQ14D), while HS&B asked how much "teachers influenced your plans for after high school" (EB049D). This difference in wording for teacher influence should introduce only minimal bias. Responses for all three significant others' influence variables were recoded to dummy variables such that 0 = "not at all" or "somewhat," and 1 = "a great deal."

Variables Used in Research Issue 2

The key outcome variable in Research Issue 2 is whether or not adolescents successfully pursued their occupational and field of study choices. Hence, the measurement of successful pursuit is first described in some detail, followed by a description of the additional variables used in this research issue.

Successful Pursuit of Occupation and Field

Occupation Successful pursuit of planned occupation could be measured in several ways. One approach considered was to use the occupation held in 1979, the time of the last follow-up. But this approach was rejected because many young adults may have already worked in their planned occupation prior to the 1979 follow-up. For example, someone who selected "Clerical" in 1972 may have worked in a clerical position for several years before deciding to attend college in 1979. Hence, an approach had to be used that would give respondents the maximum chance of having successfully attained their planned occupation; i.e., did they actually work in that planned occupation at any time between 1972 and 1979? Therefore, successful pursuit of planned occupation was determined by matching the Census occupation codes of planned occupation with the codes for the jobs held between 1972 and 1979. If a match existed between the planned occupation and any occupation held 1972 - 1979, then the respondent was defined as having successfully attained his or her planned occupation. The following occupation variables were used to identify Census code of job for each year: FQ55A (1972), FQ49A (1973), SQ76A-D (1974), TQ35A-D (1975), TQ13A-D (1976), FT55A-D (1977), FT45A-D (1978), FT12A-D (1979). In addition, the following variables were used from the Supplemental Questionnaire: FSQB2A-D (1972), FSQD2A-D (1973), FSQF2A-D (1974), FSQH2A-D (1975), FSQJ2A-D (1976).

The Census codes are contained in Appendix C.1 of the Users Manual. The codes used for the occupational categories used in this study are reported in Appendix 1 of this report. The following variables were used to determine if a respondent was working in a given year: FQ54A and FSQB1 (1972), FQ48A and FSQD1 (1973), SQ75 and FSQF1 (1974), TQ32 and FSQH1 (1975), TQ10 and FSQJ1 (1976), FT51 (1977), FT41 (1978), FT21 (1979). Since those planning on a "Professional 2" occupation would still likely be in professional school by the fourth follow-up, they were defined as having successfully attained their occupation if they were still in school. The variables used to ascertain this status in 1976 were TQ54 and TQ62 (kind of school and field of study), and the corresponding variables used in 1979 were FT82 and FT86.

The procedures for establishing successful pursuit of the "Housewife" category were different. The following variables were used to determine homemaker status: FQ54BC (1972), FQ1E (1973), SQ1E (1974), TQ1F (1976), FT10F (1977), FT9F (1978), and FT1G (1979); data were not available for 1975. Those who noted homemaker status in any of these years were defined as successful.

Field of Study The rationale for measuring successful pursuit of intended field of study was somewhat different than for planned occupation. Instead of using each follow-up, only the last two were used, to give respondents the maximum time to complete their degrees. Therefore, successful pursuit of intended field of study was determined by matching the intended field of study code with the code of the area in which a degree was actually obtained. If a match existed between the intended field of study and the field at graduation as indicated at third and fourth follow-ups, then a respondent was defined as having successfully attained his or her intended field of study. At both the third and fourth follow-ups, area of degree was used for three degrees: two or three year vocational degree, two-year academic degree, and four to five year college degree. The respective variables for third follow-up were TQ48CD, TQ48DD, and TQ48ED, and those for fourth follow-up were FT76CD, FT76DD, and FT76ED.

The field of study codes are contained in Appendix C.2 of the Users Manual. Codes for the field of study categories used in this study are reported in Appendix 2. Since a professional occupation such as law or medicine requires the completion of a degree beyond the B.A., and since it is unlikely that such education would have been completed by 1979, those intending to pursue a preprofessional field of study were also defined as successful if they were still in professional school pursuing the appropriate field of study. The items indicating type of school and field of study for the third follow-up are TQ54 and TQ62 respectively, and the corresponding items in the fourth follow-up are FT82 and FT87.

Independent Variables

Many of the variables used in Research Issue 2 are identical to those NLS variables used in Research Issue 1: number of courses in science, foreign languages, English, and mathematics, sex, high school program, race, SES, educational and employment counseling, influence of parents, teachers, and counselors, locus of control, self-concept, and aptitude. One variable, high school grades, was used in both research issues but scored differently. In Research Issue 2, the categories were set to GPA equivalents; "mostly A" = 4.0, "about half A and half B" = 3.5, "mostly B" = 3.0, "about half B and half C" = 2.5, "mostly C" = 2.0, "about half C and half D" = 1.5, "mostly D" = 1.0, "mostly below D" = .5.

The number of social science courses (SRFQ40) was coded in the same manner that the other coursework variables were coded in Research Issue 1. Remedial mathematics and remedial reading (SRFQ8A and SRFQ8C) were dummy coded such that 1 = has received and 0 = has not received. College GPA was based on several items: average grades received 1972-1973 (FQ41A), 1973-1974 (SQ39), 1974-1976 (TQ85B), and 1976-1979 (FT115); the average was computed over the nonmissing number of values after first setting the response categories to GPA equivalents. Educational aspirations was measured with BQ29B, with the categories ranging from less than high school graduation" to "go to a graduate or professional school after college." Educational aspirations of father and educational aspirations of mother were measured with BQ91A and BQ91B, with categories ranging from "wants me to quit high school without graduating" to "wants me to go to a graduate or professional school after graduating from four-year college or university." Category 7, "don't know," was recoded to 3.5 (the mid-point) for the discriminant function analyses. If the value for a given parent was missing, the value for the other parent was substituted to reduce the number of missing cases in the discriminant function analyses.

Early marriage was defined as marriage occurring in 1976 or before and was measured with items in 1979 (FT165, FT166B), 1976 (TQ129,TQ130B), 1974 (SQ105, SQ106B), and 1973 (FQ7A and FQ7C) asking about marital status and date of marriage. These items were used to develop a composite index such that 1 = married by 1976 and 0 = not married by 1976. Early childbearing was defined as having borne any children by 1976 and was measured with items in 1979 (FT176, FT179AB), 1976 (TQ138B), 1974 (SQ118), and 1973 (FQ7A, FQ8A, FQ8B) asking about the number and dates of children.

These items were used to develop a composite index such that 1 = had children by 1976 and 0 = did not have children by 1976. Early work was measured by the number of years worked between 1972 and 1975 (using items ACT472, ACT473, ACT474, ACT475).

Variables Used in Research Issue 3

Several of the variables used in Research Issue 3 have been described above: sex, race, aptitude, SES, influence of mother and father on plans, educational aspirations held by mother, educational aspirations, self-concept, locus of control, importance of success in work, importance of money, number of courses in mathematics, science, English, social studies, and foreign languages, participation in remedial mathematics, grades, influence of teachers and counselors on plans, and educational and employment counseling.

Since Research Issue 3 is an in-depth analysis of factors associated with selecting occupations and fields of study, several additional variables were examined. Read to (BB095) identifies those that have been read to at home before starting school; it was recoded 1 = "several times a week" or "every day," and 0 = the rest of the categories. Work values reflect the importance of the following factors in determining the kind of work planned: previous work experience in the area, good income to start or within a few years, job security and permanence, work that seems important and interesting, freedom to make decisions, and meeting and working with sociable friendly people (EB063A-F). The responses were recoded such that 1 = "very important" and 0 = "not important " and "somewhat important."

Several school experience variables were also added. Advanced mathematics reflects the total number of courses taken from the following: first-year algebra, second-year algebra, geometry, trigonometry, and calculus (EB005A-E). Advanced science reflects the total number of courses taken from the following: physics and chemistry (EB005F-G). Remedial English (BB011A) was coded 1 = yes and 0 = no. Vocational coursework is a cumulated index of coursework in business-office-sales, trade and industry, technical courses, and "other vocational courses" (EB004H-K). The half-year incremental categories were recoded such that 0 = "none" and 7 = "3 years or more." Those missing on all four variables were defined as missing, while those missing on fewer than all four variables were recoded to 0 for each missing value. Coop/work study (BB014A-B) was coded such that 1 = participated in either or both and 0 = participated in neither. Courses too hard was measured with EB052A, which asked how much this factor interfered with the respondent's education at his or her school; it was recoded such that 1 = "a great deal" and 0 = "not at all" and "somewhat." Poor study habits (EB052D) was coded in the same manner.

Homework was measured with BB015, the average amount of time spent on homework per week. It was coded such that 1 = "none assigned" and "have homework but don't do it," 2 = "less than 1 hour per week," 3 = "between 1 and 3 hours," 4 = "more than 3 hours but less than 5 hours," 5 = "between 5 and 10 hours," and 6 = "more than 10 hours." Absent was measured with BB016, number of days absent between the beginning of school and Christmas vacation; its original codes were used: 1 = none, 2 = 1-2 days, 3 = 3-4 days, 4 = 5-10 days, 5 = 11-15 days, 6 = 16-20 days, and 7 = 21 or more days. Participation in three types of extracurricular activities was included. Sports activities was measured with EB032A and BB032B-C, varsity athletics, other athletics, and cheerleading, pep club, majorettes. Academic-vocational activities was measured with BB032D, EB032H, BB032J, and BB032L, pariticipation in debate or drama, honorary clubs, subject matter clubs, and vocational education clubs. Service activities was measured with EB032I and EB032K, participation in newspaper, magazine, yearbook, or annual and student council, student government, and political clubs. Each variable was recoded such that 1 = active participation or leader and 0 = not participated. The variables noted for each type of activity were then cumulated.

Academic quality was measured with BB053C, ratings on quality of academic instruction. The categories were used as found (1 = poor, 2 = fair, 3 = good, 4 = excellent), except the category 5 (don't know) was recoded to 2.5 so that an ordinal measure would be retained. Academic emphasis was measured with EB035A, level of agreement with the following statement: "School should have placed more emphasis on basic academic subjects." Vocational emphasis was measured with EB035C, agreeement with "School should have placed more emphasis on vocational and technical programs." Work emphasis was measured with EB035C, agreement with "School did not offer enough practical work experience." For all three emphasis variables, 1 = "agree strongly" and "agree somewhat" and 0 = "disagree somewhat" and "disagree strongly."

Employment status was measured with BB019, work for pay week before survey, and BB022, number of hours work per week. Both were used to recode employment status to 1 = full time and 0 = less than full time; categories 6 and 7 (30-34 hours and 35 or more hours) on BB022 were used to identify full time status. Finally, several expectations were included. Expect early marriage was measured with BB081A, age marriage anticipated, and expect early child was measured with BB081B, age first child anticipated. For both variables, the values were recoded such that 1 = 18 - 21 years of age (i.e., early), and 0 = all other values. Number children expected was measured with BB082; the responses range from 1 = one to 4 = four or more.

The means and standard deviations for all variables used in each of the three research issues are reported in Appendices 3 through 8. They are reported separately for the occupation and field of study analyses because the former involved the entire sample while the latter involved only those planning to attend college.

Analysis Procedures

The overall analytical goal of the study is to more clearly understand two things: the occupational and field of study choices of adolescents and how successfully young adults pursue these choices. The research issues and the analytical strategies used in each issue all bear upon these two goals, although each addresses its own foci. Hence, Research Issue 1 focuses on the changes that have occurred in both the occupational and field of study choices as well as the changes in several predictor variables within each occupation and field of study. While Research Issue 3 also examines predictors of occupational and field choices, its focus is on an in-depth analysis of the connections between these predictors and selecting each occupation or field; Research Issue 1, on the other hand, only addresses the changes that have occurred between 1972 and 1980. Research Issue 2 clearly differs from these other two issues in its focus on rates of and predictors of successful pursuit of occupation and field of study. All three research issues contribute to our understanding of the occupational and field of study careers of young adults. All three require different analytical techniques.

Research Issue 1

Research Issue 1 addresses the changes that have occurred between 1972 and 1980 regarding both choices and predictors of those choices. Three separate subtopics are included, each with its own analysis procedures. Subtopic 1 addresses the changes in the percentages of seniors selecting each occupation and field of study category between 1972 and 1980 so that trends in occupational and field choices can be identified. The analysis involves a simple percentage distribution of both the occupational plans and the intended field of study variables for each of the two years. Ratios of the HS&B value to the NLS value, as well as the natural logs of these ratios, were calculated. Both these values, especially the natural logs, will afford comparability in that the percentages changes will be "adjusted" in terms of the base (1972) percentage. As such, the natural logs can be used to rank order the changes in percentage points.

With the changes in the choices identified, a second issue of interest is an analysis of the changes in several profile variables that may be linked to selecting an occupation or field. Hence, Subtopic 2 develops the changing profiles of those selecting each occupation and field. While the focus of Research Issue 3 is an in-depth analysis of who selects each occupation or field, this subtopic of Research Issue 1 centers on the changes in several of the predictor variables. The variables described above—personal background, school related, orientations and values, and influence of significant others—were used as profile variables.

Each profile variable was analyzed in a bivariate analysis with cohort for each occupation and field of study. Means were compared for the coursework variables, aptitude, SES, self-concept, and locus of control, and percentages were compared for the remaining variables. T-tests were used to establish the statistical significance of the differences between the two cohorts for those variables analyzed with means. For those variables reported in percentages, the ratio of the HS&B value to the NLS value was calculated, as was the natural log of this ratio. The natural logs were then used to rank order the changes in the variables analyzed with percentages, within each occupation and field of study category.

A key problem with such multiple bivariate analyses is that they fail to account for the linkages among the predictor variables themselves. Also, since cohort is one of the variables, the effects of the other predictor variables are net of cohort effects. Therefore, Subtopic 3 involves multivariate analyses of the profile variables as they relate to selecting each occupation and field of study. Each occupation and field of study category was transformed into a dichotomous dummy variable, with 1 = selecting that category. These dummy variables were then used as the dependent variables in the regression analyses.

While regression is typically used with interval and ratio level variables, several researchers have documented the robustness of multiple regression when ordinal and level and dichotomous variables are used (Borhnstedt and Carter, 1971; Kerlinger and Pedhazur, 1973). Regression analysis can also be used when the dependent variable is dichotomous (Kerlinger and Pedhazur, 1973), although the R^2 value obtained has an upper bound less than 1.0 (Morrison, 1972; Neter and Scott, 1970). While other techniques may have also been appropriate for these analyses, such as log-linear and logit analyses, the results produced by such techniques are more difficult to interpret. Regression analysis is a more common approach and the interpretation of the coefficients is straigtforward. Also, since the main purpose of Subtopic 3 was to examine how the predictor variables differentially affect the choice of occupation and field in 1972 and 1980, the most efficient way to make these comparisons was to include interaction terms (year by predictor variable) in the models. While such techniques as log-linear and logit analyses permit the inclusion of interaction terms, other considerations compelled the use of regression analysis. First, log-linear analysis only allows for categorical independent variables. Forcing categorization on the continuous variables would reduce the amount of information avaiable. Second, while logit analysis allows for continuous predictor variables, the program is very expensive to run. Since the analysis involved the estimation of 19 models, the use of regression analysis was more cost-efficient. Third, in all but extreme cases, the results of the regression and logit analyses are very similar.

Both the standardized and the unstandardized coefficients will be analyzed. The former indicate the change in percentage selecting a category for each unit increase in the independent variable. The latter indicate the net effect of each variable, and are directly comparable. The level of statistical significance employed was .01, and pairwise deletion was used for variables with missing values.

Cohort effects were assessed with the inclusion of a dummy cohort variable (0 = NLS and 1 = HS&B). Hence, the regressions were run on a single data file combining the two cohorts. The following interaction effects were also included in the analysis: cohort-sex, cohort-Hispanic, cohort-black, cohort-aptitude, and cohort-SES. Preliminary analyses indicated a high degree of multicollinearity between these interaction variables and the cohort variable. The interaction effects were therefore recoded to remove the confounding effect between the main and the interaction effects by calculating new variables for cohort, sex, Hispanic, black, aptitude and SES; the mean of each variable was subtracted from the value of each variable. The interaction effects noted above were then calculated by multiplying the cohort value by each of the other variable values. Furthermore, the interaction coefficients were used, in conjunction with the coefficients for the other variables, to calculate estimated values for the dependent variables (i. e., selecting an occupation or field). For example, the year-sex interaction term was used, along with the other coefficients, to calculate the estimated percentages of 1972 males, 1980 males, 1972 females, and 1980 females selecting that occupation or field. Hence, the estimated percentage of males in 1972 selecting an occupation category was calculated by summing together the following terms: sex coefficient times male value, year coefficient times 1972 value, year-sex coefficient times male value times 1972 value, year-aptitude coefficient times 1972 value times aptitude mean, and the coefficient times the mean for the remaining variables. With changes in the respective sex and year values, the predicted values for 1980 males, 1972 females, and 1980 females were calculated. Similar procedures were used for the other interaction terms. This procedure helps clarify the nature of the interaction terms.

Research Issue 2

Research Issue 2 assesses how successfully respondents have attained their occupational and field of study aspirations. As such, it fits in with the larger concern for understanding more fully the occupational and field of study selections of adolescents. This research issue examines the extent to which young adults successfully pursue their occupational and field of study choices. Hence, the concern lies in success rates and distinguishing those successful from those not successful on a variety of predictor or discriminating variables.

Subtopic 1 examines the proportion of those in each occupation and field of study category that successfully attained their plans. Simple percentages will be presented and analyzed. Subtopic 2 involves bivariate analyses of the independent variables with successful pursuit in each intended occupation and field of study. These analyses will yield profiles of the variables most salient for successful pursuit in a given category. Crosstabulations were employed for non-dichotomous nominal level variables, with chi square indicating the level of statistical significance. T tests were used for the remaining variables. Values of .01 or less were deemed statistically significant.

Such individual bivariate analyses help portray the person most likely to successfully pursue his or her selection. However, they offer only a limited perspective in that the predictor variables are themselves frequently interrelated, thereby confounding the bivariate results. Hence, multivariate analyses are required to assess the net effect of each independent variable. Subtopic 3 represents these multivariate analyses. Discriminant function analysis was used. Discriminant function analysis is ideally suited for examining the differences on several variables between two or more mutually exclusive groups (Kachigan, 1982; Kerlinger and Pedhazur, 1973; Klecka, 1980). It serves both prediction and classification purposes such that the results can be used to assess the accuracy of prediction or classification with the same or different samples

(Morrison, 1969; Sanathanan, 1975). The results also indicate which of the discriminating variables contribute most to the ability of the discriminant function.

Discriminant functions were run for each occupation and field of study category, and the criterion variable was successful pursuit versus unsuccessful pursuit. Stepwise discriminant functions were run with all the discriminating variables considered for inclusion into the equation; the signficance of the F to enter was set at .01. The variables included were all entered simultaneously via the direct entry method, with F to enter set at .01.

Several statistics will be analyzed. The canonical correlation is a measure of association which summarizes the degree of relatedness between the groups and the discriminant function. As such, it provides some indication of the substantive utitility of the function. The canonical correlation squared (eta-squared) indicates the proportion of variation in the discriminant function explained by the independent variables. Only the standardized coefficients will be analyzed since the unstandardized coefficients are primarily used to compute the discriminant scores for individual cases. The standardized coefficients are analogous to those in regression analysis in that they allow an assessment of the relative contribution of the individual variables. The significance level of Wilks' lambda reflects the likelihood that the differences in the function are due to chance. The percent classified correctly reflects the percentage of cases classified correctly using the discriminant function coefficients. Tau is a proportional reduction in error statistic that tests for the improvement in classification over random assignment based on prior probabilities. Since the assignment of group values by the computer program is arbitrary, the signs of the group centroids were used to establish the "directionality" of the coefficients.

Research Issue 3

Research Issue 3 continues the focus of the other two research issues on understanding who selects and attains various occupations and fields of study. Now the focus is on a more in-depth analysis of who selects each occupation and field of study. This research issue differs from Research Issue 1 in that now the focus is on the nature of those selecting each category, whereas in Research Issue 1 the focus was more on how changes in a subset of these independent variables were linked with selecting each category. Also, cohort effects received prominence in Research Issue 1 but are ignored in Research Issue 3 since the only data analyzed are HS&B data. Continuing the approach followed above, Subtopic 1 involves bivariate analyses while Subtopic 2 involves multivariate analyses. One-way analysis of variance was used in the first subtopic in order to establish the statistical significance of the differences among the categories for a given variable. If statistically signficant, the results are then analyzed in terms of the relative magnitude of the value as compared to the other occupations or fields. The multivariate analyses are performed to determine the net effects of each variable relative to selecting each occupation and field category. Because the focus is on selecting versus not selecting a category, discriminant function analysis was again employed. The results are then analyzed in terms of the variables that best discriminate between those who did and did not select a given category.

Throughout the analyses, attention is centered on what the results mean for a better understanding of the occupational and field of study choices of young adults. While each category will be examined, special attention will be devoted to examining the general conclusions across occupational and field of study categories. To that end, the next chapter examines the results for Research Issue 1.

CHAPTER 3

Research Issue 1: Changes Between 1972 and 1980

This chapter reviews the results of the analyses for the first research issue, which examines the changes that have occurred between 1972 and 1980 in the occupational plans and intended fields of study. Three subtopics will be addressed. The first is a review of the percentages of seniors selecting each of the occupation and fields of study in each of the two years. The second examines changes in the profiles of those selecting each occupation and field of study. The third involves multivariate analyses of the predictor variables for each occupation and field of study.

Subtopic 1: Changes in Percentages Selecting Each Occupation and Field

The first subtopic compares the percentages of seniors selecting each occupation and field of study across the two cohorts. The data for occupation are reported in Table 1 and the data for field of study are reported in Table 2. Each table reports the percentages for the two cohorts, the differences between these two values, the level of statistical significance of the differences, the ratio of the HS&B value to the NLS value, and the natural logs of these ratios. The change in the percentage points between 1972 and 1980 indicates the magnitude of the absolute change, while the ratio norms the change according to the base (NLS) value. The natural logs (sign ignored) allow a rank-ordering of the changes. All results described are statistically significant (.01) unless noted.

The analyses of the changes between 1972 and 1980 focus on several changes in the social structure, particularly the economic situation. However, such reliance on sociological developments overlooks the fact that many adolescents are relatively insensitive to the market place and make their occupation and field of study choices based on very personalistic factors. For example, a number of future teachers may have been influenced by close relatives who are teachers or may have decided to enter teaching out of a desire to help others (Lortie, 1975). In spite of such personalistic factors, however, the magnitude of some of the changes clearly shows the impact changes in the economy and market place can have on occupation and field of study plans.

Planned Occupation

The natural logs in Table 3.1 indicate that the greatest change occurred for the "Teacher" category, with a decline of 7.0 percentage points (from 10.9 to 3.9) and a log of -1.028. Interest in teaching has declined dramatically. This decrease is due in part to the oversupply of teachers beginning in the early 1970's, which attracted widespread media attention. Since most students selecting this category are female, this decline may simply reflect the heightened opportunities for women in other fields. It also reflects a decreased need for teachers due to the reduced birth rates of the decade. In addition, the increase in teachers' salaries did not match the Consumer Price Index or the increases for many other occupations. Finally, the decade has seen heightened criticism of teachers and reduced confidence in the teaching profession. Undoubtedly, still further declines will occur, in spite of some predictions of teacher shortages in the late 1980's (National Center for Education Statistics, 1982).

The second greatest change occurred for the "Manager/Proprietor" category, with an increase of 6.9 percentage points (from 4.2 to 11.1) and a log of .972. This category includes those with an interest in business, a field increasingly appealing to adolescents. Undoubtedly the worsening economic situation has encouraged youth to become more interested in money and career advancement, neither of which is as available in teaching.

The third greatest change occurred for the "Housewife" category, with an increase of 1.5 percentage points (from 1.4 to 2.9) and a log of .728. While the proportion selecting this category remains quite small, the doubling in the percentage selecting this category is unexpected. Given the expanded roles and opportunities for women, one would have expected a decline in this category. Perhaps the increase reflects a shift away from the expanded role for women such that 1980 senior women are more likely to select this more traditional occupation.

The fourth greatest change occurred for the "Service" category, with a decline of 2.5 percentage points (from 7.8 to 5.3) and a log of -.386. This decrease may reflect the reduced need for service workers as the economy worsens. For example, many cities have reduced their police and fire forces in the face of budget declines. The decrease may also reflect a shift to the "Manager/Proprietor" category as seniors confront the relatively low salaries for those in the Service category.

The fifth greatest change occurred for the "Technical" category, with an increase of 2.6 percentage points (from 5.6 to 8.2) and a log of .381. This increase is undoubtedly due to the substantial rise in interest in computer programming and operation, as well as in other technical fields.

The sixth greatest change occurred for the "Clerical/Sales" category, with a decline of 4.0 percentage points (from 15.9 to 11.9) and a log of -.290. This decline may be related to fewer jobs available as many of these occupations are eliminated with automation. For example, the number of bank tellers needed will decline considerably with advances in automated teller operations. This decline may also be related to the increased proportions of seniors selecting business related occupations.

The seventh greatest change occurred for the "Military" category, with an increase of .4 percentage points (from 1.6 to 2.0) and a log of .223. While not a substantial increase, the results do suggest that slightly more high school seniors plan a military career. Perhaps the military has a more favorable status in the eyes of seniors now than it did in the post-Viet Nam era of the early 1970's.

The eighth greatest change occurred for the "Farmer/Laborer" category, with an increase of .6 percentage points (from 3.3 to 3.9) and a log of .167. While also a relatively small increase, the results do suggest a slightly heightened interest in farming or in a laborer position.

The ninth greatest change occurred for the "Professional 2" category, with an increase of 1.4 percentage points (from 11.4 to 12.8) and a log of .116. Interest in such occupations as doctor, dentist, lawyer, and college teacher has increased slightly over the last decade; these high status positions continue to attract the interest of a substantial minority of high school graduates.

The tenth greatest change occurred for the "Craftsman/Operative" category, with a decrease of 1.2 percentage points (from 11.9 to 10.7) and a log of -.106. Seniors seem to be slightly less interested in this type of an occupation. Perhaps some of those who were formerly interested in this occupation are now found in the Technical category, which experienced a rise over the decade.

The change for the "Professional 1" category was an increase of one percentage point (from 26.2 to 27.2), but this increase is not statistically significant. However, this category comprises the largest proportion of seniors, suggesting that more seniors are interested in such occupations as accountants, engineers, nurses, and the like than any other single category. The results also indicate that this high level of interest has changed very little over the decade.

In short, the results reflect several of the changes in the larger social and economic structure of the last decade. The reduced demand for and status of teachers is shown very clearly in the reduced interest in teaching. The rapid movement toward high technology is seen in the increase in the technical positions. The increased interest in Manager/Proprietor occupations and the decreased interest in Clerical/Sales occupations may reflect the higher income and status of the former category. Combining the two professional categories, almost two-fifths of the respondents of both cohorts prefer a professional occupation; this proportion far exceeds those for the remaining categories. These results parallel those found by other researchers (Herzog, 1982; Rumberger, 1982).

Discrepancies frequently exist between what adolescents plan and the actual distribution in the labor force. This discrepancy is most noticeable in the Professional category since many plan on professional occupations but relatively few complete the training required and actually enter such occupations. For example, 44.5% of 1972 seniors and 50.7 of 1980 seniors plan on attaining a Professional/Technical occupation (percentages recalculated without including Military and Housewife). Yet only 10.5% of the 1972 labor force and 12.8% of the 1980 labor force were actually in such occupations (U.S. Bureau of the Census, 1981:402-404). Similarly, the percentage of job openings in these categories between 1980 and 1990 will be only 16.3% (Shelton, 1983). Also, 16.4% of 1972 seniors and 12.5% of 1980 seniors plan to enter a Clerical/Sales occupation, while the proportions of the labor force in such occupations were 24.0% and 24.9% and the percentage of openings 1980 - 1990 will be 28.2%. Corresponding figures for Craftsman/Operative occcupations are 12.2% and 11.3% for seniors' plans and 29.8% and 27.1% for actual distribution, and 24.3% for openings. The data for Manager/Administrator are 4.3% and 11.7% for seniors' plans and 9.8% and 11.2% for actual distribution, and 9.5% for openings. The corresponding data for Service are 8.0% and 5.6% for seniors' plans and 13.5% and 13.3% for actual distribution, and 18.1% for openings. For Farmer/Laborer, the data are 3.4% and 4.1% for seniors' plans and 8.9% and 7.4% for actual distribution, and 3.7% for openings. For teacher, the data are 11.2% and 4.1% for seniors' plans and 3.5% and 3.2% for actual distribution (openings not available).

In short, these data reflect a "status stretch" among seniors. Over half of 1980 seniors anticipate a Professional/Technical occupation, but only about 13% of the labor force actually occupy such positions and the growth rate is modest. Similarly, only about 12% anticipate a Clerical/Sales or Craftsman/Operative occupation, but about one-fourth of the labor force occupies such positions. Over twice as many people are actually in Service occupations as there are seniors planning on such an occupation. This definite gap between anticipated occupational status and likely occupational status is reduced as seniors become more familiar with the range of occupations available and as they progress through the stages of occupational decision making (cf. Rothstein, 1980; Weinstein, 1980). Research Issue 2 will examine some of the factors associated with successful pursuit of occupational plans.

Intended Field of Study

Table 3.2 reports the data for changes in the intended fields of study categories. Three categories account for most of the changes. The greatest change occurred for the "Computer/Engineering/Architecture" category, with an increase of 8.2 percentage points (from 8.7 to 16.9) and a log of .664. This change undoubtedly reflects the rapid technological development of the last decade, particularly involving computers. Also reflecting the changes of the last decade is the substantial decline in interest in Education. This category experienced the second greatest change, with a decline of 5.4 percentage points (from 11.9 to 6.5) and a log of -.605. Reasons for this decline have been noted above in the discussion on teaching as an occupation (see page 58). The third greatest change occurred for the "Business" category, with an increase of 10.6 percentage points (from 13.0 to 23.6) and a log of .596. This substantial increase undoubtedly reflects seniors' heightened concern with studying a field which will produce a job and a greater income than some of the other fields (such as Education).

The fourth greatest change occurred for the "Preprofessional" category, with a decline of 4.2 percentage points (from 12.0 to 7.8) and a log of -.431. This decline is at variance with the stable level of interest in a "Professional 2" occupation noted above. It should be noted that the "Preprofessional" category was measured somewhat differently in NLS and HS&B; the NLS data were gathered and recoded from an open ended listing of fields while the HS&B data were gathered from a simple Preprofessional category (see Chapter 2). Perhaps some HS&B students were less likely to select a "Preprofessional" category than more specific substantive areas; NLS students selecting appropriate specific substantive areas were recoded to "Preprofessional." The decline may also reflect the fact that some seniors may plan a professional occupation such as doctor or research scientist, but intend to study such fields as biology, physical science or mathematics.

The fifth greatest change occurred for the "Social Science" category, with a decline of 3.7 percentage points (from 11.4 to 7.7) and a log of -.392. The social sciences have attracted far fewer students over the last decade, due to the perceived difficulty in obtaining employment in this field and due to the decreased concern with social policy and social service issues. At the beginning of the decade, many students were still interested in the social sciences as a carry-over from the high level of social consciousness in the 1960's. Today's economic situation encourages students to downplay such interests and instead emphasize areas that have greater employment possibilities. The sixth greatest change occurred for the "Biology/Physical Science/Mathematics" category, with a decline of 1.9 percentage points (from 7.7 to 5.8) and a log of -.283. This decline reflects a trend noted by several recent national assessments of the American educational system: decreased interest in the natural sciences and mathematics as well as reduced capabilities in these fields. Recent developments designed to both increase the interest in and the capabilities of students in these fields should result in more students selecting this category in the future.

The seventh greatest change occurred for the "Health" category, with a decline of 2.8 percentage points (from 11.9 to 9.1) and a log of -.268. Since most students selecting this category are female, this decline may simply reflect the heightened opportunities for women in other fields, particularly computers and engineering.

The eighth greatest change occurred for the "Humanities/Arts" category, with a decline of 1.2 percentage points (from 15.4 to 14.2) and a log of -.081. Interest in this category has remained quite stable, although slightly fewer seniors expressed interest in this category in 1980. Perhaps news media accounts of philosophy students and English graduates driving taxicabs and working as food servers have begun to have their effect on students' choices. The change for the remaining category, "Agricultural/Home Economics/Vocational" is not statistically significant. Interest in these more vocational areas has remained quite stable at about 8%. Recent years have seen much more interest in vocational training on the part of educators and the public, but these results suggest that any impact of such developments is more likely to be seen at the high school level than at the college level.

In short, the results for intended field of study in college parallel those for planned occupation. Substantial increases occurred in the technology and engineering fields as well as in business, and a substantial decline occurred in education and social sciences. These changes are largely reflections of the changes in the American economic system in the last decade. Perhaps as the economy continues to improve high school seniors of the future may again select those fields which yield lower incomes and job prestige. These results parallel those found by other researchers (Lyson and Brown, 1982; Polachek, 1978; Shapiro and Crowley, 1982).

Subtopic 2: Bivariate Analyses

This section will review the results of the bivariate analyses relating the variables to selecting each planned occupation and field of study category. The results will be presented per occupation/field of study category. Background variables, school-related variables, and values and orientations will be examined. The natural logs will be used to make comparisons both within each category and across categories. Logs were calculated only for variables reported in percentages, and only log values for variables with statistically significant changes were used in the comparisons. Only statistically significant differences (.01) will be reported. Means and standard deviations for the variables used in the occupation and field analyses are reported in Appendices 3 and 4 respectively.

Planned Occupation

Professional 2 Interest in this occupation increased slightly between 1972 and 1980, from 11.4% to 12.8%. The changes in the independent variables are reported in Table 3.3. The results show increased interest among females and minorities, increased interest among those in the general and vocational curricula and decreased interest among those in the academic curriculum, an increase in grades, a decrease in foreign languages courses, a decline in parental influence but increase in teacher influence, increased importance of both money and work success, and increased educational and employment counseling.

The percentage of females aspiring to a Professional 2 occupation has increased from 33.7 to 51.4 between 1972 and 1980, with a log value of .422. SES declined slightly, from .38 to .31. Perhaps this decline reflects an increased opportunity structure as those from lower social classes increasingly aspire to a professional position. This conclusion is substantiated with the results for minority group membership. The percentage of Hispanics aspiring to a Professional 2 occupation was 2.0 in 1972 and 6.0 in 1980, with a log value of 1.098. Since the overall percentages of Hispanics in 1972 and 1980 are 3.4 and 6.3, these results show the percentage Hispanic closer to the population value in 1980 than in 1972. Similarly, the percentage of blacks increased from 7.0 to 11.0, with a log value of .452. Since the overall percentages black in 1972 and 1980 are 8.5 and 11.6, the percentage black has also moved closer to the population value. Correspondingly, the percentage of whites aspiring to a Professional 2 position declined from 91.0 in 1972 to 83.1 in 1980, with a log value of -.091. In short, the results show greater interest in a Professional 2 position among minorities. The percentages still remain quite low, although they do reflect the distribution of Hispanics, blacks, and whites in the larger population somewhat more accurately in 1980 than in 1972.

Aptitude scores declined slightly, from 57.28 to 55.71, between 1972 and 1980. Perhaps this decline indicates that persons from a wider range of ability backgrounds now aspire to a Professional 2 occupation. The results may also parallel those above in that more minority group members are aspiring to a Professional 2 occupation; research on SAT scores of minority students consistently indicates lower scores than those for whites.

The assertion that a wider variety of backgrounds are represented among those aspiring to a Professional 2 occupation is also seen in the data for curriculum placement. In 1972, 14.8% of those aspiring to a Professional 2 occupation were in the general curriculum as opposed to 23.1% in 1980; the log value is .445. Similarly, the percentage in the vocational curriculum increased from 3.6 to 7.1; the log value is .679. The percentage in the academic curriculum therefore declined somewhat, from 81.6 to 69.9; the log value is -.155. In short, these results clearly indicate a greater diversity in the curricular backgrounds of those aspiring to a Professional 2 occupation.

In spite of the slight decline in aptitude over the two cohorts, there has been an increase in the percentage of those receiving grades of A or B, from 48.8 in 1972 to 54.5 in 1980; the log value is .110. To some extent, however, the increase in this and other occupational categories is a reflection of grade inflation. Nonetheless, those aspiring to a Professional 2 occupation are getting somewhat better grades.

Regarding coursework, the mean number of mathematics courses completed held stable (4.95 in 1972 and 4.97 in 1980). The mean number of English courses completed declined slightly, from 6.13 to 6.03, a decline of .10 courses, and the mean number of foreign languages courses declined from 3.69 to 2.66, a decline of 1.03 courses.

The percentage noting substantial parental influence declined from 49.3 to 37.9 between 1972 and 1980; this decline of 11.4 percentage points has a log value of -.263. Teachers' influence increased substantially, from 10.4% to 17.7%. This increase of 7.3 percentage points has a log value of .532. Hence, the results indicate that parental influence has declined, teacher influence has increased substantially, and the influence of counselors has not changed.

Statistically significant changes occurred in both of the values items. The percentage of those noting that money was very important increased from 19.5 in 1972 to 29.2 in 1980; this increase of 9.7 percentage points has a log value of .404. The percentage of those indicating that success in work is very important increased slightly from 87.0 to 90.7; this increase of 3.7 percentage points has a log value of .042. Hence, both money and success in work are more important for those aspiring to a Professional 2 position, although the increase in the former is much greater.

The percentage noting the provision of educational counseling increased from 58.2 to 66.7; this increase of 8.5 percentage points has a log value of .136. The percentage noting employment counseling also increased, from 17.4 to 32.2; this increase of 14.8 percentage points has a log value of .615. The results clearly indicate that schools provided more of both types of counseling.

In summary, the characteristics of those aspiring to a "Professional 2" occupation have changed in several respects between 1972 and 1980. Comparing across log values within this occupation, the increase in Hispanics is clearly the most substantial change. The increase in vocational curriculum membership is next, followed by the increases in employment counseling and teacher influence. Regarding variables without logs, the only substantial change was the drop in number of foreign languages courses completed.

Together with some of the other changes, the results reflect substantial increased interest among women and minorities as these occupations become more open. The curriculum results show a wider diversity in background of these students. In spite of the relatively high salaries found in these occupations, money has become even more important over the decade. The increase in counseling services along with the increased influence of teachers indicates that school personnel are perhaps becoming more relevant to these students.

Professional 1. Interest in this occupation increased minimally between 1972 and 1980, from 26.2% to 27.2%. The changes in the independent variables are reported in Table 3.4. The results show increased interest among women and minorities, increased general and vocational curricula representation and declining academic curriculum representation, higher grades, more mathematics but less science and foreign languages coursework, increases in self-concept and locus of control, a decline in parental influence but an increase in teacher influence, increased importance of money and work success, and increased employment counseling.

This category experienced an increase in percentage female between 1972 and 1980. The increase was 4.9 percentage points, a rise from 52.6 to 57.5; the log value is .089. Although this category includes several occupations dominated by females (e.g., nurse, social worker), it also includes several occupations that are male-dominated (e.g., accountant, engineer). This census category does not include school teachers, and since the percentage of nurses and librarians that are female have remained quite stable, this slight increase may reflect increased interest among women in such fields as accountancy and engineering.

The percentage of both Hispanics and blacks aspiring to a Professional 1 occupation have increased. The increase for Hispanics is 2.1%, from 3.3% to 5.4%; the log value is .492. For blacks, the increase is 1.9%, from 10.1% to 12.0%; the log value is .172. The overall increases for Hispanics and blacks were from 3.4% to 6.3% and from 8.5% to 11.6% respectively; the changes in this occupation resemble these increases. A corresponding decline of 4.1 percentage points occurred for whites, from 86.6 to 82.5; the log value is -.049. Hence, a slight increase occurred among minorities selecting a Professional 1 occupation, although the increase is not as substantial as it is for those aspiring to a Professional 2 position.

The mean aptitude score for these students declined slightly, from 53.13 to 52.44, a decline of .69. Though statistically significant, the decline is not of substantive significance. Several changes occurred in curriculum location. An increase of 4.5 percentage points occurred among those in the general curriculum, a change from 28.0 to 32.5; the log value is .150. A decline of 8.1 percentage points occurred among those in the academic curriculum, from 60.5 to 52.4; the log value is -.144. A slight increase of 3.7 percentage points occurred among those in the vocational curriculum, an increase from 11.5% to 15.2%; the log value is .279. Hence, the greatest change occurred among those in the vocational curriculum, with approximately equal changes for those in the general and academic curricula (increase for general and decline for academic). In short, the changes reflect the greater likelihood that those in the general and vocational curriculum will aspire to a

Professional 1 occupation, while those in the academic curriculum are slightly less likely to do so.

An increase of 6.8 percentage points occurred among those attaining grades of A's and B's, from 34.6 to 41.4; the log value is .179. This increase may reflect the more stringent entry requirements for some of these occupations. The mean number of mathematics courses completed increased by .22, from 4.22 to 4.44. The mean number of science courses completed declined by .10, from 3.93 to 3.83. The number of foreign languages courses completed declined by .99, from 3.07 to 2.08.

A slight increase of .06 occurred for self-concept, from .00 to .06, and the mean locus of control score increased by .04, from .08 to .12. A decline of 10.5 percentage points occurred for parental influence, from 43.4 to 32.9; the log value is -.277. A slight increase of 2.3 percentage points occurred for counselors' influence, from 9.6 to 11.9; the log value is .215. An increase of 5.8 percentage points occurred for teachers' influence, from 11.3 to 17.1; the log value is .414. The results indicate that those aspiring to a Professional 1 occupation are only somewhat less influenced by parents and substantially more influenced by teachers in the period between 1972 and 1980. The increase for the influence of counselors is modest. However, in terms of overall influence, the percentage indicating a great deal of parental influence is still by far the greatest. Like other plans categories, parents continue to have the most impact on future plans.

An increase of 14.6 percentage points occurred for importance of money, from 15.0 to 29.6; the log value is .680. An increase of 6.0 percentage points occurred for success in work, from 84.9 to 90.9 percent; the log value is .068. The results indicate that the importance of both money and success in work have increased substantially between 1972 and 1980. Perhaps these changes reflect the relatively low incomes of many in this category as well as the reduced status of such occupations as social work and nursing.

A modest increase of 3.0 percentage points occurred for educational counseling, from 60.4 to 63.4; the log value is .048. A somewhat greater increase of 11.2 percentage points occurred for employment counseling, from 26.1 to 37.3; the log value is .357. The difference in log values indicates that there was a much greater increase in the provision of employment counseling, perhaps reflecting the increased difficulties in securing employment in this category. The relatively low increase in educational counseling may simply reflect the fact that many interested in these occupations are already very familiar with the educational requirements of these occupations.

In summary, the characteristics of those aspiring to a Professional 1 occupation have changed somewhat between 1972 and 1980, although the proportion aspiring to such position has not changed significantly. Comparing the log values, the increased importance of money and the increased percentage Hispanics were the two greatest changes. The next two greatest changes are the increased influence of teachers and the provision of employment counseling. A substantial increase among vocational curriculum students reflects the growing vocational preparation of these students. A modest decrease in parents' influence and a modest increase in the influence of counselors also occurred. The remaining log values were much smaller. Regarding the variables with means (i.e., without logs), a substantial decline occurred in foreign languages courses, and a modest increase occurred for the mathematics courses taken.

Together with some of the other changes, these results underscore the increased interest shown by women and minorities in this professional category as well (although the percentage minority overall has increased). The curriculum results also show a wider diversity in background and training among these students. While science and foreign languages preparation have declined, mathematics training has increased noticeably when compared to other occupations; apparently these students recognize the mathematical demands of many occupations in this category. Students in this category also reflect higher levels of self-concept, which perhaps is more relevant for aspiring to these occupations today. Increased teacher influence and provision of counseling services again calls attention to the increased role of school personnel. These students also increasingly value money and work success, reflecting the changing economic and social climate.

Technical Interest in this occupation increased from 5.6% to 8.2% between 1972 and 1980. The changes in the independent variables are reported in Table 3.5. The results show a decline in SES and increased interest among minorities, a decline in aptitude but an increase in high grades, increased interest among general and vocational curriculum students and decreased proportion of academic curriculum students, declines in science and foreign languages coursework, a decline in locus of control, decreased parental influence and increased counselor and teacher influence, an increase in the importance of money, and greater employment and educational counseling services.

SES declined by .07, from -.01 to -.08. The percentage Hispanics increased substantially, from 3.4 to 6.9; the log value is .708. A substantial increase also occurred in the percentage black, from 7.3 to 14.5, an increase of almost two-fold. The log value for this increase is .686. Both these increases exceed the overall increases in the percentages Hispanic and black. A corresponding decline occurred in the percentage white, from 89.3 to 78.6; the log value is -.128. The results show substantially increased minority interest in a Technical occupation.

A decline of 1.44 occurred for aptitude, from 52.29 to 50.85. Those from the general curriculum increased by 6.4 percentage points, from 27.6 to 34.0; the log value is .209. The percentage in the academic curriculum declined by 14.4 percentage points, from 54.3 to 39.9; the log value is -.308. An increase of 8.0 percentage points occurred among those in the vocational curriculum, from 18.1 to 26.1; the log value is .366. Hence, a significant shift occurred in the curricular backgrounds of these students, with substantial increases among those in the general and vocational curricula, and a corresponding decline among those in the academic curriculum. Since interest in this field increased between 1972 and 1980, these data may also reflect greater interest among students in all three curricula, with the increases in the general and vocational curricula simple more substantial than that in the academic curriculum.

The percentage of those with grades of A's and B's increased by 6.2 percentage points, from 26.8 to 33.0; the log value is .208. The number of science courses completed declined by .28 (from 3.96 to 3.68) and the number of foreign languages courses declined by 1.10 (from 2.72 to 1.62). A decline of .07 occurred for the locus of control variable, from .09 to .02; those aspiring to a Technical occupation were somewhat more externally oriented in 1980 than they were in 1972.

Regarding significant others, the percentage noting substantial parental influence declined by 13.0 percentage points, from 42.5 to 29.5; the log value is -.365. But increases occurred in the influence of counselors and teachers. The percentage noting substantial counselor influence rose by 3.2 percentage points, from 9.3 to 12.5; the log value is .300. A greater increase of 6.6 percentage points occurred for teachers' influence, from 8.9 to 15.5; the log value is .555. Although parents still retain the bulk of the influence, their importance has declined while that of counselors, and especially teachers, has increased. Money was stressed more by 1980 than 1972 seniors. The increase of 11.6 percentage points reflects a change from 21.1 to 32.7; the log value is .438. Finally, employment counseling increased by 9.8 percentage points (from 34.1 to 43.9); the log value is .253.

Comparing the log values among the predictor variables for this occupation, by far the most substantial changes occurred in the percentage of Hispanics and blacks; these increased exceed the increases in the overall percentages Hispanic and black. These data continue to reflect a trend towards greater minority participation in higher status occupations. The third and fourth greatest changes pertain to the influence of teachers and the importance of money. Teachers are apparently becoming more important for those aspiring to a Technical occupation, and the increased importance of money parallels that for many other categories. The fifth and seventh greatest changes occurred for those in the vocational and academic curricula, with an increase in the former and a corresponding decline in the latter. It seems that these students are increasingly taking advantage of the opportunities a vocational curriculum may afford in this area. The sixth greatest change was the decline in the influence of parents, while the eighth greatest change was the increase in the influence of counselors. This latter item, along with the increased influence of teachers, suggests that school personnel are becoming more relevant for occupational decision-making. This conclusion is supported by the ninth greatest change, the increase in employment counseling. Regarding those variables with means (i.e., without logs), declines occurred in SES, number of science and foreign languages courses taken, and locus of control.

Teacher Interest in this occupation declined from 10.9% to 3.9% between 1972 and 1980. Changes in the independent variables are reported in Table 3.6. The results show a higher percentage of women and Hispanics, declines in SES and aptitude, increased general and vocational curricula representation and decreased academic curriculum representation, declines in mathematics, science, and foreign languages coursework, declines in self-concept and locus of control, decreased parental influence, increased importance of money, and increased employment counseling.

Already quite high, the percentage female increased further by 9.3 percentage points, from 72.6 to 81.9; the log value is .121. Since interest in teaching declined substantially between 1972 and 1980, this change in the percentage female may simply reflect a more substantial declining interest among males than among females. A slight decline of .10 occurred for SES, from .12 to .02, suggesting that the socioeconomic status background of those aspiring to a teaching occupation has declined somewhat. An increase of 2.8 percentage points occurred among Hispanics, from 3.6 to 6.4; the log value is .575. This increase parallels the overall increase in Hispanics.

A substantial decline of 2.99 occurred for aptitude, from 53.59 to 50.60. Statistically significant changes also occurred for those in all three curricula. Those in the general curriculum increased by 18.8 percentage points, from 22.2 to 41.0; the log value is .613. The percentage in the vocational curriculum almost doubled, from 6.0 to 11.5; the log value is .651. A corresponding decline of 24.3 percentage points occurred for those in the academic curriculum, from 71.9 to 47.6; the log value is .412. The results show clearly that future teachers may come increasingly from the general and vocational curricula and less from the academic curriculum. The number of mathematics courses declined by .36, from 4.31 to 3.95; the number of science courses declined by .39, from 3.79 to 3.40; and the number of foreign languages courses declined by 1.44, from 3.45 to 2.01.

Substantial declines also occurred for both orientation variables. Self-concept declined by .15, from .07 to -.08, and locus of control declined by .12, from .18 to .06. The results show that between 1972 and 1980 the self-concept of future teachers declined while their external orientation increased. The percentage noting substantial parental influence declined substantially, by 20.2 percentage points, from 54.2 to 34.0; the log value is -.466. The percentage noting that money is very important rose by 7.2 percentage points, from 10.3 to 17.5; the log value is .530. Finally, those noting employment counseling increased by 16.3 percentage points, from 26.3 to 42.6; the log value is .482. The change in those noting educational counseling was non-statistically significant.

An examination of the log values for the variables within this occupation indicates that the two greatest changes were the increased percentages for those coming from the vocational and general curricula, highlighting the greater diversity in academic backgrounds of future teachers. The third greatest change was the increased percentage of Hispanics, and the fourth was the increased importance of money. A substantial increase in employment counseling occurred, as did a substantial decline in parental influence. Regarding those variables with means (i.e., without logs), modest declines occurred for SES, coursework in mathematics, science and foreign languages, aptitude, self-concept and locus of control. In fact, future teachers were the only ones to have completed fewer mathematics courses, and the declines in science and foreign languages coursework were the greatest among the occupations. Similarly, the decline in aptitude scores was by far the most substantial decline. Together these results reflect a substantial decline in the academic capabilities and preparation of future teachers. In addition, the declines in self-concept and locus of control were the most substantial, underscoring the lower self-concept and greater external orientation of future teachers. In short, future teachers in 1980 appear considerably less qualified and less positively oriented.

Manager/Proprietor Interest in this occupation increased from 4.2% to 11.1% between 1972 and 1980. The changes in the independent variables are reported in Table 3.7. The results show increased interest among women and blacks, a decline in aptitude and in increase in grades, increased general curriculum and decreased academic curriculum representation, declines in English, science, and foreign languages coursework, increased mathematics coursework, a decline in parental influence as well as an increase in teacher influence, increased importance of money, and increased employment counseling.

The percentage of females increased substantially, by 18.5 percentage points, from 23.5 to 42.0; the log value is .581. This dramatic increase clearly reflects the greater opportunities for women in this occupation. The percentage black increased by 5.2 percentage points, from 6.8 to 12.0; the log value is .568. This rate of increase slightly exceeds the increase in overall percentage black (from 8.5 to 11.6). The percentage for whites correspondingly declined by 6.4 percentage points, from 89.4 to 83.0; the log value is -.074.

A decline of 1.25 occurred for aptitude, from 51.37 to 50.12. The percentage in the general curriculum increased by 10.3 percentage points, from 28.9 to 39.2; the log value is .305. The percentage in the academic curriculum declined by 7.5 percentage points, from 45.3 to 37.8; the log value is -.181. The percentage receiving high grades increased by 4.8 percentage points, from 23.5 to 28.3; the log value is .186. The number of English courses declined by .11 (from 6.01 to 5.90), the number of mathematics courses increased by .18 (from 3.92 to 4.10), the number of science courses declined by .27 (from 3.61 to 3.34), and the number of foreign languages courses declined by .79 (from 2.52 to 1.73).

The percentage noting that parents had a great deal of influence on their future plans declined by 12.8 percentage points, from 45.1 to 32.3; the log value is -.334. The percentage noting substantial teacher influence increased slightly, by 3.1 percentage points, from 8.4 to 11.5; the log value is .314. Like many other occupations, the influence of parents declined (although it still comprises the bulk of the influence), and the influence of teachers increased. Also like many other occupations, the percentage noting the importance of money increased, by 13.2 percentage points, from 24.6 to 37.8; the log value is .430. Finally, the provision of employment counseling increased by 17.3 percentage points, from 25.2 to 42.5; the log value for this substantial increase is .523.

A comparison across the logs within this occupation indicates that the two most substantial changes were the increased percentage female and black; the increased interest shown by women is the greatest of the occupations. These results reflect the greater opportunities for women and blacks in Manager/Proprietor occupations as traditional discriminatory behavior abates. The third greatest change was for employment counseling, and the fourth greatest change was the increased importance of money. The fifth and sixth greatest changes were the decline in the influence of parents and the increase in influence of teachers. Together with the increase in employment counseling, these results reflect the shifting balance of influence from parents to school personnel. Among those variables with means (i.e., without logs), declines occurred in aptitude and in science and foreign languages courses completed. An increase occurred for the number of mathematics courses completed. With the exception of mathematics training, the results reflect a slightly less capable and academically trained cohort in 1980.

Craftsman/Operative Interest in this occupation declined from 11.9% to 10.7% between 1972 and 1980. The changes in the independent variables are reported in Table 3.8. The results show increased interest among Hispanics, an increase in grades, declines in English and foreign languages coursework, decreased parental but increased counselor and teacher influence, increased importance of money, and increases in both types of counseling services.

The percentage of Hispanics planning on this occupation increased by 3.5 percentage points, from 4.1 to 7.6; the log value is .617. Both these values slightly exceed the percentages Hispanic in the two years (3.4 and 6.3). The percentage of whites declined by 3.9 percentage points from 87.0 to 83.1; the log value is -.050. Hence, little movement occurred over the decade in terms of female and minority interest in this type of occupation, with the exception of heightened interest among Hispanics. A decline of 3.0 percentage points occurred for those in the academic curriculum, from 17.2 to 14.2; the log value is -.192. Although still quite low, the percentages of those receiving high grades increased by 4.1 percentage points, from 8.4 to 12.5; the log value is .400. The number of English courses declined by .26, from 5.85 to 5.59, and the number of foreign languages courses declined by .58, from 1.25 to .67. Like grades, the absolute values are quite low in comparison to the other occupations. Hence, it is interesting that they have declined further. The number of mathematics and science courses completed did not change statistically significantly.

The percentage noting substantial parental influence declined by 13.0 percentage points, from 37.2 to 24.2; the log value is -.430. The influence of both counselors and teachers increased, the former by 2.9 percentage points (from 6.2 to 9.1) and the latter by 3.2 (from 8.1 to 11.3). The respective log values are .384 and .333. The percentage noting the importance of money rose by 15.8 percentage points, from 26.2 to 42.0; the log value is .472. Finally, both educational and employment counseling services increased, the former by 6.7 percentage points (from 51.1 to 57.8) and the latter by 11.7 percentage points (from 39.6 to 51.3). The respective logs are .123 and .2[illegible] Students planning on a Craftsman/Operative occupation note the increased provision of both kinds of counseling services, perhaps because both are important for success in this field.

A comparison across the log values within this occupation indicates that the most substantial change was the increased percentage Hispanic. The second greatest change was the increased importance of money, the third was the decline of parental influence, the fourth was the increase in grades, and the fifth was the increased influence of counselors. The increase in grades was the greatest among the occupations. In short, those selecting this occupation are increasingly Hispanic, experience less parental influence, value money more, receive higher grades, and experience more influence from counselors. Together with the increased teacher influence, these results show again the increased salience of school personnel. Regarding those variables with means (i.e. without logs), modest declines occurred in the numbers of English and foreign languages courses.

Clerical/Sales Interest in this occupation declined from 15.9% to 11.9% between 1972 and 1980. The changes in the independent variables are reported in Table 3.9. The results show a decline in interest shown by women, increased interest shown by minorities, a decline in aptitude, increased general but decreased vocational curriculum representation, increased mathematics but decreased English and foreign languages coursework, declines in both self-concept and locus of control, decreased parental but increased counselor and teacher influence, increased importance of both money and work success, and increases in both types of counseling services.

The percentage of females aspiring to a Clerical/Sales position declined by 4.9 percentage points, from 92.0 to 87.1; the log value is -.055. Given the high percentage of females selecting this occupational category (second only to Housewife), this decline undoubtedly reflects increased interest in traditionally male-dominated occupations, such as the two professional categories. The percentage Hispanic increased by 3.5 percentage points (from 4.2 to 7.7), and the percentage black increased by 5.1 percentage points (from 9.4 to 14.5); the log values for these increases are .606 and .433, respectively. For both minority groups, the percentages in both years slightly exceed those for the overall percentage Hispanic and black. A corresponding decline of 8.5 percentage points occurred for whites (from 86.4 to 77.9); the log value is -.104. Hence minority representation in the Clerical/Sales category increased moderately.

Aptitude declined modestly by 1.67, from 47.99 to 46.32. Although the percent in the academic curriculum remained stable, those in the general curriculum increased by 8.0 percentage points (from 27.4 to 35.4), and those in the vocational curriculum declined by 8.2 percentage points (from 55.0 to 46.8); the log values are .256 and -.161, respectively. The decline for those in the vocational curriculum suggests that this curriculum is being increasingly selected by those with a more specific vocational occupation in mind. The number of mathematics courses rose by .41 (from 2.99 to 3.40), the number of English courses declined by .08 (from 5.90 to 5.82), and the number of foreign languages courses declined by .97 (from 2.15 to 1.18). Clerical/Sales aspirants are taking more mathematics courses but fewer English and foreign languages courses.

Self-concept declined by .06 (from -.09 to -.15) and locus of control declined by the same amount (from -.04 to -.10), indicating a slight decline in self-concept and a slight movement towards greater externality. Parental influence declined by 15.4 percentage points (from 40.4 to 25.0), while counselors' influence increased by 3.9 percentage points (from 6.7 to 10.6) and teachers' influence increased by 5.1 percentage points (from 9.4 to 14.5). The log values for these changes are -.480, .459, and .433 respectively. Although parents still retain the major influence, their impact has declined while that of counselors and teachers has increased moderately.

Clerical/Sales aspirants value money and success in work more in 1980 than they did in 1972. The increase for money is 15.2 percentage points (from 11.7 to 26.9), and the increase for success in work is 4.5 percentage points (from 83.8 to 88.3); the log values are .833 and .052. These students increasingly value money and success in work. Finally, these respondents note increased educational and employment counseling. The increase for the former is 8.5 percentage points (from 54.8 to 63.3), and the increase for the latter is 7.9 percentage points (from 47.8 to 55.7); the log values are .144 and .153.

Comparing the log values for the variables in this occupation indicates that the greatest changes were the increased importance of money and the increased Hispanic representation. The increase for percentage black was also one of the greater changes; minority interest in Clerical/Sales occupations has clearly increased. The third, fourth, and fifth greatest changes are the reduced parental influence and increased influence of counselors and teachers. School personnel are apparently more salient now than they were a decade ago. Regarding the variables with means (i.e., without logs), a relatively large decline occurred for aptitude; this decline is one of the most substantial among the occupations. Apparently some of the more highly qualified seniors who formerly selected this occupation are now selecting other occupations. Modest declines occurred for English and foreign languages coursework while mathematics coursework increased; this latter change may reflect increased recognition of the importance of mathematics for many positions in this category. Declines also occurred for both orientation variables; these students exhibit somewhat lower self-concept and greater externality in 1980 than in 1972.

Service Interest in this occupation declined from 7.8% to 5.3% over the decade. The changes in the independent variables are reported in Table 3.10. The results show a decline in SES, increased interest among minorities, increased general curriculum representation, more mathematics but fewer foreign languages courses, a decline in locus of control, reduced parental but increased teacher influence, increased importance of money, and an increase in employment counseling.

Socioeconomic status declined slightly by .08, from -.17 to -.25. Increased minority aspirations are reflected in the 3.7 percentage point increase among Hispanics (from 3.9 to 7.6) and the 3.4 percentage point increase among blacks (from 7.3 to 10.7). While the values for Hispanics are above the overall percentages Hispanic in the two years (3.4 and 6.3), the values for blacks are below (8.5 and 11.6). However, the rates of increase parallel those in the overall percentages. A corresponding modest decline of 7.1 percentage points occurred among whites (from 88.8 to 81.7). The log values for these changes are .667, .382, and -.083 respectively. Like many other occupations, minorities increasingly aspire to this occupation. Since interest in this occupation declined overall, these data may also simply reflect a greater rate of decline among whites.

Aptitude declined by .97, from 47.42 to 46.45. The only statistically significant change to take place for the various curricula was an increase of 6.1 percentage points among those in the general curriculum (from 45.6 to 51.7); the log value is .126.

Service aspirants also took .22 more mathematics courses (from 3.12 to 3.34) and 1.02 fewer foreign languages courses (from 2.15 to 1.13).

Locus of control declined by .10 (from -.06 to -.16), indicating increased externality among these students. Like most other occupations, parents retained a substantial level of influence, although the percentage declined by 16.1 percentage points (from 39.5 to 23.4); the log value is -.523. A slight increase of 3.6 percentage points occurred for teachers' influence (from 6.6 to 10.2); the log value is .435. Money became more important over the intervening years, increasing by 15.3 percentage points (from 14.2 to 29.5); the log value is .731. Finally, those noting employment counseling increased by 8.3 percentage points (from 37.1 to 45.4); the log value is .202.

The increase in the importance of money is the greatest increase among the variables with log values. The increased interest shown by Hispanics and blacks are the second and fifth greatest changes respectively; minorities have shown an increased interest in the Service occupations. The third greatest change was the decline in parental influence, while the fourth was the increased influence of teachers; again we see the decline in parental influence and an increase in school personnel influence (in this case, teachers). A modest decline also occurred in locus of control, suggesting greater externality.

Farmer/Laborer Interest in this occupation increased from 3.3% to 3.9% over the decade. Changes in the independent variables are reported in Table 3.11. The results show a decline in SES, increased interest among Hispanics, a decline in academic curriculum representation, declines in science and foreign languages coursework, increased internality, a decline in parental and an increase in counselor influence, increased importance of money, and increases in both types of counseling services.

SES declined by .05, from -.23 to -.28, while the percentage Hispanics increased by 4.2 percentage points (from 2.4 to 6.6) and the percentage white declined by 6.4

percentage points (from 95.1 to 88.7). The log values for these latter two changes are 1.012 and -.074. The rate of increase among Hispanics exceeds the rate of increase among Hispanics overall (from 3.4 to 6.3). Aptitude declined by .68, from 47.19 to 46.51, a modest decline. The percentage from an academic curriculum declined by 6.2 percentage points, from 21.7 to 15.5; the log value is -.336. Science courses declined .26 (from 3.19 to 2.93) and foreign language courses declined by .80 (from 1.49 to .69).

The mean locus of control score increased by .06 (from -.29 to -.23). The raw value indicates a very external orientation and the change indicates a slight movement towards greater internality. Parents' influence declined by 9.6 percentage points (from 34.7 to 25.1), and counselors' influence increased by 4.3 percentage points (from 3.7 to 8.0). The log values are -.324 and .771 respectively. The increase for counselors' influence may reflect the changing nature of a farming (and to some extent, a laborer) occupation. Farming has changed considerably in complexity and in terms of start-up costs, and perhaps counselors contribute to a more informed decision making in this category. The importance of money increased by 10.3 percentage points (from 28.1 to 38.4), with a log value of .312. Finally, seniors in this category note increased provision of both educational and employment counseling. Those noting educational counseling increased by 12.7 percentage points (from 45.7 to 58.4), and those noting employment counseling increased by 20.4 percentage points (from 31.5 to 51.9); the log values are .245 and .499. The interpretation noted above may also apply here: more information is needed to make the decision to enter the increasingly complex and expensive field of farming.

The increased interest shown by Hispanics was clearly the most substantial change, as indicated by the logs. This increase exceeds the increase in overall percentage Hispanic. The increase in counselors' influence was second and the greater provision of employment counseling was third; together with the increase in educational counseling, these results highlight the increased salience of counseling resources. The decline in students from the academic curriculum was fourth, the decline in parental influence was fifth, and the increased importance of money was sixth. In addition, the results show a decline in SES and aptitude. This decline in aptitude, along with the declines in academic curriculum location and science and foreign languages coursework, reflect a lower level of academic ability and preparation among future farmers and laborers.

Military Interest in this occupation increased from 1.6% to 2.0% between 1972 and 1980. The results reported in Table 3.12 show several changes among those aspiring to this occupation: increased minority interest, increased vocational and decreased academic curriculum representation, decreased foreign languages coursework, decreased parental influence, increased importance of money, and increased employment counseling.

Few statistically significant changes occurred, undoubtedly due to the relatively small subgroup sizes. The percent of Hispanics in this category increased by 5.6 percentage points (from 3.3 to 8.9), and the percentage of blacks increased by 16.7 percentage points (from 8.3 to 25.0); the respective log values are .992 and 1.100. Both these increase substantially exceed the overall increases for Hispanics (from 3.4 to 6.3) and blacks (from 8.5 to 11.6). A corresponding decline of 22.3 percentage points occurred for whites (from 88.4 to 66.1); the log value is -.291. Minority interest in Military occupations has risen substantially. Vocational curriculum representation increased by 9.9 percentage points (from 17.1 to 27.0), while academic curriculum representation declined by 17.3 percentage points (from 44.6 to 27.3); the respective log values are .457 and -.491. Future military personnel are much less likely to come from the academic curriculum and somewhat more likely to come from the vocational curriculum. This change may reflect the end of the draft in 1973 and the corresponding increased interest in the Military as a vehicle for vocational preparation.

Future military personnel took on the average 1.02 fewer foreign languages courses, a decline from 2.59 to 1.57. The influence of parents declined by 28.1 percentage points (from 48.7 to 20.6), with a log value of -.860. Like all other occupations, the influence of parents has declined. Also like all other occupations, the importance of money has increased, by 13.5 percentage points (from 18.9 to 32.4), with a log value of .539. Finally, the provision of employment counseling increased by 19.0 percentage points (from 27.0 to 46.0), with a log value of .533.

The increases in the percentages black and Hispanic are the first and third greatest changes within this occupation; the increase in percentage black is the greatest among all the occupations. These increases also substantially exceed the increases in overall percentages Hispanic and black. These results clearly documenting the greater minority interest in military occupations. The substantial decline in foreign languages courses is somewhat surprising given the importance of foreign language proficiency among military personnel. This decline is the second greatest change. The fourth greatest change is the decline in parental influence.

Housewife Interest in this occupation increased from 1.4% to 2.9% between 1972 and 1980. The results reported in Table 3.13 show increased interest among Hispanics, increased mathematics but decreased foreign languages coursework, decreased parental but increased counselor influence, increased importance of money, and increased educational and employment counseling.

Like the preceding category, few of the changes are statistically significant (undoubtedly due to the small subgroup size). Perhaps many variables did not change because they are less directly connected with selecting the Housewife category, a less clearly identified and recognized occupational category. Although already very high, the percentage female increased by 2.7 percentage points (from 96.3 to 99.0), with a log value of .028. Hispanics increased by 3.7 percentage points (from .7 to 4.4), with a log value of 1.838. Interestingly, the number of mathematics courses increased .42, from 2.81 to 3.23, and foreign languages courses declined by .53, from 1.68 to 1.15. Parental influence also declined, by 13.9 percentage points (from 34.7 to 20.8), and counselors' influence increased by 4.9 percentage points (from 1.8 to 6.7); the respective log values are -.512 and 1.314. As with all other occupations, the importance of money increased by 8.9 percentage points (from 6.0 to 14.9), with a log value of .910. Finally, educational counseling increased by 18.4 percentage points (from 40.3 to 58.7), and employment counseling increased by 9.4 percentage points (from 38.0 to 47.4); the respective log values are .376 and .221.

The greatest change among the variables in this occupation is the increase in percent Hispanic; this increase is also the most substantial among the occupations. More so than other racial groups, Hispanic women are increasingly likely to aspire to a Housewife position. The second greatest change is the increased influence of counselors; this change also is the most substantial among the occupations and may suggest that counselors are continuing to steer a number of women into this traditional occupation. The third greatest change is the increased importance of money. This increase is also the most substantial among the occupations and may reflect the increasing economic difficulties of maintaining a household. The fourth greatest change is the decreased influence of parents. Among variables with means (i.e., without logs), a modest increase occurred for number of mathematics courses completed and a modest decline occurred for number of foreign languages courses completed.

Summary Several conclusions emerge in these bivariate analyses of the changes in predictor variables in the various occupations. Most notable is the consistency of some of the changes. For example, interest among Hispanics increased in 10 of the 11 occupations, and interest among blacks increased in seven occupations and held steady in the remainder (although substantial increases also occurred in the overall percentages Hispanic and black). The results show a broadening of minority interest in almost all occupations; with abating discrimination, these results forecast a substantially greater integrated workforce. In addition, interest shown by women increased for all the higher status occupations, documenting the movement away from traditional sex role stereotypes.

All 11 categories reflect the increased importance of money. The stagnating economy of the decade is clearly reflected in this heightened concern with economic security. Also, all 11 categories reflect increased employment counseling, also undoubtedly a reflection of the worsening employment outlook. While increased student usage of such services may explain the greater quantitative indicators, the consistency of the results suggests that high schools have in fact provided additional employment counseling services over the decade. About half the occupations show increased educational counseling as well, mostly in the lower status occupations.

Another noticeable trend has been the consistent drop in parental influence; the percentages dropped in all 11 occupations. To some extent this drop has been picked up by influence by school personnel; teachers' influence increased in six occupations and counselors' influence increased in four occupations. However, it is important to note that parents still retain the bulk of the influence adolescents report. The drop in their influence may be part of the overall decline in the influence of the family institution that has developed over the last decade.

A final trend pertains to the academic experiences of adolescents. The percentage in the academic curriculum dropped in seven occupations while the percentage in the general curriculum increased in seven occupations; the percentage in the vocational curriculum increased in five occupations. In addition, foreign language coursework dropped in all 11 categories and science coursework dropped in five categories. Aptitude dropped in four categories and grades increased in five categories. Interestingly, mathematics coursework increased in five categories. Since the mathematical abilities of students have declined some over the decade, these results may reflect increased participation in remedial mathematics courses as both students and educators increasingly realized the importance of mathematics. Overall, the results portray a definite broadening in the curriculum background of aspirants to many occupations, as well as a decline in academic abilities and preparation. Perhaps these results are a product of the decade of deemphasis on academic preparation and emphasis on electives and minimal requirements.

Several of the variables saw lesser levels of change. SES dropped somewhat in four occupations, including Teacher. English coursework dropped in three occupations. Minor variations occurred for both self-concept and locus of control. The importance of work success changed increased in only three occupations. In short, the major changes found in the data reflect the major changes of the decade: expansion of minority and female representation, the decline in the economy, and a deemphasis on academic training.

Intended Field of Study

Preprofessional Interest in this field declined between 1972 and 1980, from 12.0% to 7.8%. The results for this field are reported in Table 3.14 and show increased interest among women and minorities, a decline in aptitude but an increase in grades, increased vocational and general but decreased academic curriculum representation, decreased English and foreign languages coursework, increased self-concept and locus of control, increased teacher influence, increased emphasis on money and work success, and increased counseling services.

The percentage female increased by 13.0 percentage points, from 36.3 to 49.3; the log value is .306. The results show clearly the increased interest among females in such occupations as doctor, lawyer, and dentist. The percentage Hispanic increased by 3.4 percentage points (from 2.0 to 5.4) and percentage black increased by 4.2 percentage points (from 6.2 to 10.4); the respective log values are .993 and .517. These increases closely parallel the increases in overall percentage Hispanic (from 2.8 to 5.3) and percentage black (from 6.1 to 10.5). A corresponding decline of 7.5 percentage points occurred among whites (from 91.8 to 84.3); the log value is -.085. The results document clearly increased minority interest in such fields.

Like most fields, the mean aptitude score declined, in this case by 1.20 (from 58.43 to 57.23). An increase of 4.9 percentage points occurred among those in the general curriculum (from 11.3 to 16.2), a decline of 7.7 percentage points for those in the academic curriculum (from 86.8 to 79.1), and a slight increase of 2.7 percentage points (from 1.9 to 4.6) for those in the vocational curriculum. The respective log values are .360, -.093, and .884. The results indicate that those planning to pursue a Preprofessional field of study are somewhat less likely to come from the academic curriculum and somewhat more likely to come from the general and vocational curricula. The percentage receiving high grades rose by 12.0 percentage points, from 52.2 to 64.2; the log value is .207. Perhaps this increase reflects heightened competitiveness in this field. The number of English courses declined by .13 (from 6.19 to 6.06), and the number of foreign languages courses declined by .89 (from 3.86 to 2.97).

Self-concept has increased by .10 (from .19 to .29), and locus of control increased by .08 (from .27 to .35). The results indicate a slight increase in both self-concept and internal orientation. The influence of teachers has increased by 5.8 percentage points (from 10.2 to 16.0); the log value is .450.

Money has become even more important to these seniors, increasing by 15.5 percentage points (from 18.5 to 34.0); the log value is .609. The importance of success in work has increased by 6.7 percentage points (from 87.9 to 94.6); the log value is .073. The data show that even among those aspiring to high-paying fields, money and work success have become increasingly important. Schools reportedly provided both more educational and employment counseling in the eyes of these students. The former increased by 6.2 percentage points (from 59.1 to 65.3) and the latter rose 15.1 percentage points (from 14.8 to 29.9); the respective log values are .100 and .703.

A comparison of the log values for the variables indicates that the greatest change occurred for the percentage Hispanic and that the fifth greatest change was the increased percentage black; both these changes are among the most substantial among the fields. However, these increases parallel the increases in overall percentages Hispanic and black. Increased vocational curriculum representation was the second greatest change. The third greatest change involved more employment counseling, and the fourth greatest change was the increased importance of money. Seniors in 1980 have experienced greater employment counseling and value money even more than did seniors in 1972. This latter finding is interesting given the fact that professional positions typically pay among the highest salaries. Perhaps this finding simply reflects a greater concern with money given the economic changes of the decade. The increased percentage female was the sixth greatest change, although this increase was one of the most substantial among the fields. Clearly, preprofessional fields attract more women. A comparison of the values with means (i.e., without logs), indicates a slight decline in aptitude and in the number of English and foreign languages courses completed, and a slight increase in both self-concept and internal locus of control.

Humanities/Arts Although the level of interest in Humanities/Arts remained quite stable, several changes occurred among the predictor variables (see Table 15). The results show a decline in SES, increased percentage black, a decline in aptitude, increased general and vocational but decreased academic curriculum representation, a decline in foreign languages coursework, decreased parental but increased teacher influence, increased importance of both money and work success, and increased counseling services.

The percentage of females did not change appreciably, and remained at slightly less than two-thirds. SES declined slightly by .07 (from .29 to .22), suggesting that more recent seniors came from slightly lower socioeconomic status backgrounds. An increase of 5.0 percentage points occurred for blacks (from 5.7 to 10.7); the log value is .630. While the percentage for 1972 is slightly below the overall percentage black that year (6.1), the percentage for 1980 is slightly above the overall percentage for that year (10.5), indicating a somewhat higher rate of increased interest among blacks in this field. A corresponding decline of 5.6 percentage points occurred for whites (from 90.7 to 85.1); the log value is -.064. Hence, blacks are more likely to plan on studying Humanities/Arts, and whites slightly less likely.

Aptitude declined by 1.91 (from 55.48 to 53.57), a slight decline. Statistically significant changes also occurred in all three curricula. The figure for the general curriculum increased by 6.7 percentage points (from 24.9 to 31.6), the increase for the vocational curriculum was 4.0 percentage points (from 4.6 to 8.6), and the corresponding decline for the academic curriculum was 10.2 percentage points (from 70.1 to 59.9). The respective log values are .238. .626, and -.157. Hence, those in the academic curriculum—those usually most likely to pursue Humanitites/Arts—declined modestly, while those in the vocational and general curricula increased modestly. This change reflects a growing diversification of interest among those from the general and vocational curricula. The number of foreign languages courses declined by .96, from 3.58 to 2.62, a modest decline. This decline is interesting, given the usual interest in foreign languages among those pursuing Humanities/Arts.

Parental influence declined by 11.5 percentage points (from 44.6 to 33.1), and teachers' influence increased by 5.7 percentage points (from 17.1 to 22.8). The respective log values are -.300 and .290. Parental influence has declined noticeably, although parents retain the bulk of the influence on future plans. The influence of teachers has increased to a small extent. Money has become noticeably more important for these students, with a rise of 14.8 percentage points (from 13.2 to 28.0); the log value is .752. An increase of 8.1 percentage points occurred for the success in work variable, from 81.2 to 89.3; the log value is .095. Finally, both types of counseling services increased modestly, educational counseling by 6.6 percentage points (from 57.7 to 64.3), and employment counseling by 15.6 percentage points (from 19.6 to 35.2). The respective log values are .108 and .586. Hence, a substantial increase in employment counseling and a lesser increase in educational counseling have occurred.

The most substantial change among the variables with logs was the increased importance of money; the increase is also the greatest among the fields. This rate of change is undoubtedly due to the relatively low salaries and difficulty of securing employment in this field. The second greatest change was the considerable rise in percentage black, reflecting greater interest among blacks in Humanities/Arts (although the percentage remains quite low). Increased interest among vocational students was the third greatest change, suggesting that the humanities and arts are drawing interest beyond those in the academic curriculum. The fourth greatest change was for employment counseling, indicating that schools are providing considerably more employment counseling. Regarding those variables with means (i.e., without logs), SES declined slightly, as did the number of foreign languages courses completed. Most notable was the decline in the number of foreign languages courses, a suprising finding given the traditional emphasis on foreign languages for Humanities/Arts students.

Education The percentage interested in Education declined by 5.4 percentage points between 1972 and 1980, from 11.9 to 6.5. Regarding changes in the predictor variables, the results reported in Table 3.16 show increased interest among women and decreased interest among whites, declines in SES and aptitude, decreased academic but increased general curriculum representation, a decline in foreign languages coursework, decreased parental influence, increased importance of money, and increased employment counseling.

The percentage of whites dropped by 3.9 percentage points (from 91.9 to 88.0); the log value is -.043. Aptitude declined substantially, by 2.28, from 53.64 to 51.36;

the aptitude of those planning to enter Education in 1980 was clearly lower than nearly a decade earlier. The percentage in the academic curriculum dropped by 19.3 percentage points (from 71.4 to 52.1), and the percentage in the general curriculum increased by 16.9 percentage points (from 22.6 to 39.5); the respective log values are -.315 and .558. Education is definitely less appealing to those in the academic curriculum and increasingly appealing to those in the general curriculum, although those in the academic curriculum still comprise the majority. Like most other fields, those pursuing education have taken noticeably fewer foreign languages courses, on the average of 1.46 fewer (from 3.53 to 2.07).

A decline of 15.4 percentage points occurred for parental influence (54.8 to 39.4); the log value is -.330. In spite of the decline, parents still have the most influence. Like most other students, Education students increasingly value money, up by 5.7 percentage points (from 12.4 to 18.1); the log value is .378. One might expect money to be more important to these students given the lagging increase in teachers' salaries. Finally, future education students also note greater employment counseling, up by 16.2 percentage points (from 25.4 to 41.6); the log value is .493.

The increase in the percentage in the general curriculum was the greatest increase among the variables with logs in this field. Interest in Education has clearly broadened beyond that traditionally found in the academic curriculum. As many of those in the academic curriculum who formerly pursued Education moved into other fields, students in the general curriculum have realized that the demands for acquiring an education degree are not as stringent as those in some of the other fields, and therefore yield easier entry into college. Substantiating this conclusion is the decline among those in the academic curriculum.

The second greatest change was the increased provision of employment counseling, and the third was the increased importance of money. Once again, money has become an increasingly important issue. Perhaps future education students attach more importance to money as the real income of their chosen field continues to decline. A comparison of the variables with means (i.e., without logs), indicates a substantial decline in aptitude. In fact, the decline in aptitude is the second greatest decline in fields, substantiating various studies documenting distinct declines in the aptitude and academic abilities of Education students. The decline in foreign languages coursework was also substantial, and also is far greater than the declines found in other fields. These results again underscore the weakened academic preparation and abilities of future Education students.

Business The decade has seen substantially increased interest in Business, up 10.6 percentage points (from 13.0 to 23.6). Table 3.17 shows several changes in the predictor variables: increased interest among women and blacks, a decline in aptitude but an increase in grades, increased general but decreased academic curriculum representation, declines in science and foreign languages coursework, decreased parental but increased teacher influence, increased importance of both money and work success, and increased employment counseling.

The percentage of females interested in Business rose considerably, by 20.4 percentage points (from 36.3 to 56.7); the log value is .446. Like the increases in some of the other fields, this substantial increase documents the expanded interest among females in fields traditionally dominated by males. Blacks interested in pursuing Business rose by 3.5 percentage points (from 7.9 to 11.4); the log value is .367. Both these values are slightly above the percentages overall black (6.1 and 10.5), showing a slight disproportionate interest in Business among blacks. A corresponding decline of 5.0 percentage points occurred for whites (from 88.2 to 83.2); the log value is -.060.

Aptitude declined by 1.04, from 52.95 to 51.91, a small decline. A slight increase of 3.7 percentage points occurred for those in the general curriculum (from 25.6 to 29.3), and a slight decline of 5.4 percentage points (from 53.5 to 48.1) occurred for those in the academic curriculum; the respective log values are .135 and -.106. The results indicate minor changes in the curriculum background of future Business students, with slightly more coming from the general curriculum and slightly fewer coming from the academic curriculum. Like most other fields, the percentage of future Business students receiving high grades increased, by 8.3 percentage points (from 33.6 to 41.9); the log value is .221. The number of science courses declined by 2.5 (from 3.67 to 3.42), and the number of foreign languages courses declined by .95 (from 2.96 to 2.01). Future Business students are decreasingly well prepared in the sciences and foreign languages.

The percentage noting substantial parental influence declined by 11.7 percentage points (from 48.5 to 36.8), and those noting substantial teacher influence increased by 6.1 percentage points (from 8.4 to 14.5); the respective log values are -.276 and .546. Like most other fields, parents have less influence, although they remain important significant others. Teachers have become increasingly important for future Business students. Also like most other fields, money has increased considerably in importance, by 13.3 percentage points (from 21.4 to 34.7); the log value is .483. Those noting that success in work is very important rose by 4.1 percentage points (from 88.7 to 92.8), with a log value of .045. The increased importance of money may parallel the increased interest in Business as many who formerly pursued other fields now pursue Business due to the perceived greater monetary reward. The slight increase in the importance of work success may also parallel the increased interest in the field. Finally, the percentage noting the provision of employment counseling rose by 12.5 percentage points (from 28.6 to 41.5), with a log value of .363. Along with students pursuing many other fields, Business students note the provision of employment counseling, perhaps a reflection of heightened interest of school personnel in helping graduates pursue employment.

The increased influence of teachers was the greatest change among the log values within the field of Business; this change is proportionally greater than the other changes within this field. Perhaps teachers are counseling their students to pursue Business. The increased importance of money was the second greatest change, reflecting the reason why more people are pursuing Business. The third greatest change was the increased percentage females, and the fourth was the increased percentage blacks; the increased percentage female was the greatest among the fields. Together these changes reflect greater interest among women and blacks in Business, a traditionally male and white occupation. The substantial rates of change portend greater sex and race equality in the future. Also substantial was the increase in high grades. In fact, this increase is one of the most substantial among the fields. Perhaps this increase reflects students' beliefs that high grades are required for entry into a business program. Regarding the variables with means (i.e., without logs), aptitude declined slightly, as did the number of science and foreign languages courses.

Social Science A decline of 3.7 percentage points occurred between 1972 and 1980 among those interested in Social Science, from 11.4 to 7.7. Table 3.18 reports the changes in the predictor variables. The results show increased interest among women and minorities, higher grades, increased mathematics but decreased foreign languages coursework, an increase in locus of control, increased teacher and counselor influence, increased importance of both money and work success, and increased counseling services.

The proportion of females rose by 21.4 percentage points, from 50.5 to 71.9; the log value is .353. Perhaps men were more attuned to the lack of job potential and income in the social sciences, and were among the first to select other more financially rewarding fields of study. The percentage Hispanic increased by 3.5 percentage points (from 2.8 to 6.3) and the number of blacks rose by 4.1 percentage points (from 7.0 to 11.1); the respective log values are .811 and .461. The increased interest among Hispanics slightly exceeds the increase in overall percentage Hispanic (from 2.8 to 5.3), the values for blacks slightly exceed the overall percentages black for both years (6.1 and 10.5). In short, by 1980 both groups showed slightly disproportionately greater interest. A corresponding decline of 7.7 percentage points occurred for whites (from 90.3 to 82.6), with a log value of -.089. Hence, the Social Science fields are increasingly selected by women and minorities.

Those receiving high grades increased by 8.7 percentage points (from 37.0 to 45.7), with a log value of .211. Interestingly, the number of mathematics courses rose by .26, from 4.28 to 4.54. Since the social sciences do not typically emphasize mathematics, this increase is unexpected. Like most other fields, however, the number of foreign languages courses completed dropped, by .73 (from 3.48 to 2.75).

Locus of control increased by .08, from .19 to .27, reflecting a more internal orientation among Social Science students. The influence of both counselors and teachers increased, the former by 6.9 percentage points (from 6.9 to 13.8) and the latter by 9.3 percentage points (from 8.9 to 18.2); the respective log values are .693 and .715. School personnel have become more important for future social science students. Money has become more important; the percentage noting that money is very important rose by 13.0 percentage points (from 13.3 to 26.3), with a log value of .682. Those noting the importance of work success rose by 10.5 percentage points (from 79.1 to 89.6), with a log value of .125. Those intending to study Social Sciences increasingly value money and work success. Finally, future Social Science students note the greater availability of both educational and employment counseling. The increase for the former is 7.8 percentage points (from 57.3 to 65.1), and the increase for the latter is 15.9 percentage points (from 15.8 to 31.7); the respective log values are .128 and .696.

The greatest change among the predictor variables within this field (as indicated by the logs) is the increased proportion Hispanic. Along with the less substantial but still positive increase in percentage black, this change reflects greater minority interest in Social Science (although increases in overall percentages Hispanic and black have also occurred). The second and fourth greatest changes were the increased influence of teachers and counselors; both these were also the greatest among the fields. Together with the increase in employment counseling, these changes signify the greater influence of school personnel and services on those interested in Social Science.

Biology/Physical Sciences/Mathematics A slight decline of 1.9 percentage points occurred between 1972 and 1980 in this field (from 7.7 to 5.8). In spite of this minor decline, several changes developed among the predictor variables (see Table 3.19). The results show increased interest among Hispanics and among those in the general and vocational curricula, decreased interest among those in the academic curriculum, a decline in foreign languages coursework, decreased parental influence, increased importance of money, and increased employment counseling.

Hispanics are somewhat more likely to select this field now than in 1972, up 3.3 percentage points (from .90 to 4.2); the log value is 1.540. This rate of increase exceeds the rate of increase in overall percentage Hispanic (from 2.8 to 5.3). A corresponding decline of 5.2 percentage points occurred for whites (from 94.3 to 89.1); the log value is -.057. The rate of increase among Hispanics is quite substantial, indicating greater Hispanic representation in such fields in the future. Statistically significant changes occurred for those in all three curricula pursuing this field. The percentage from the general curriculum rose by 8.1 percentage points (from 13.5 to 21.6), the percentage in the academic curriculum declined by 11.5 percentage points (from 84.5% to 73.0%), and the percentage in vocational curriculum increased by 3.5 percentage points (from 2.0 to 5.5); the respective log values for these changes are .470, -.146 and 1.010. The decline in interest among those in the academic curriculum is somewhat surprising given the frequent academic prerequisites for studying Biology/Physical Science/Mathematics in college. Perhaps these changes reflect a simultaneous loosening of entry requirements at the college level and broadened interest in fields outside those normally pursued in each of the three curricula.

The only statistically significant change among the coursework variables was the decline of .78 in the number of foreign languages courses (from 3.54 to 2.76). This decline parallels that in all of the other fields. Parental influence declined by 14.3 percentage points, from 50.7 to 36.4; the log value is .331. Although still the major influence, parents have lost some of their influence. Like students in all other fields, those intending to study Biology/Physical Science/Mathematics also valued money more in 1980 than in 1972, up 7.9 percentage points (from 15.4 to 23.3); the log value is .414. Finally, students in this category observe substantial increases in employment counseling, up 11.7 percentage points (from 20.5 to 32.2); the log value is .452.

The greatest change in the variables with logs is the increased interest among Hispanics; this increase is also the most substantial among the fields and exceeds the increase in overall percentage Hispanic. The second and third greatest changes are the increased interest among those in the vocational and general curricula; both of these are also the most substantial among the fields. The fourth greatest change is the increased provision of employment counseling. The results underscore the greater Hispanic interest and the broadening of interest in this field among those not following the traditional academic curriculum.

Computer/Engineering/Architecture A substantial increase of 8.2 percentage points occurred in this field between 1972 and 1980, from 8.7 to 17.9. Changes in the variables associated with this increased interest are reported in Table 3.20. The results show increased interest among women and minorities, increased general but decreased academic curriculum representation, higher grades, more mathematics but less foreign languages coursework, less parental but more teacher and counselor influence, increased importance of both money and work success, and increased employment counseling.

The percentage female rose by 16.0 percentage points (from 7.9 to 23.9), with a log value of 1.107. The percentage Hispanic rose by 3.1 percentage points (from 2.5 to

5.6), the percentage black rose by 7.2 percentage points (from 5.0 to 12.2), and the percentage whites correspondingly declined by 10.2 percentage points (from 92.4 to 82.2); the respective log values are .806, .899, and -.117. Although modest increases for the two minority groups, the logs indicate that the rate of increase is substantial. Also, the increases parallel the increases in overall percentages Hispanic and black.

Those in the vocational curriclum interested in this field rose by 5.5 percentage points (from 6.7 to 12.2), and those in the academic curriculum interested in this field declined by 7.0 percentage points (from 74.0 to 67.0); the respective log values are .599 and -.099. Like those in many other fields, those in the vocational curriculum show increased interest and those in the academic curriculum show a decline in interest. Those with high grades selecting this field rose by 13.7 percentage points (from 38.7 to 52.4), with a log value of .303. Like most other fields, those selecting this field have experienced grade inflation. Given the mathematics requirements for this field, it is not surprising that the number of mathematics courses rose by .16, from 5.30 to 5.46. The number of foreign languages courses declined by .67 (from 2.84 to 2.17).

The influence of counselors and teachers increased while that of parents declined. The increase for counselors' influence was 4.1 percentage points (from 9.1 to 13.2), the influence of teachers rose by 7.4 percentage points (from 8.8 to 16.2), and the influence of parents declined by 12.8 percentage points (from 49.4 to 36.6); the respective log values are .372, .610, and -.300. School personnel have exerted more influence on students pursuing this field, while parental influence has declined.

Money increased in importance, by 9.1 percentage points (from 24.9 to 34.0), and work success increased by 3.9 percentage points (from 88.4 to 92.3); the respective log values are .311 and .043. The increased importance of money in particular, but also work success, are again noted. The greater employment and promotional opportunities in this field may account for both the increased interest in the field and the increased importance of money and work success. Finally, the provision of employment counseling increased, by 8.5 percentage points (from 26.8 to 35.3), with a log value of .275.

The increased interest among females is proportionately the greatest change within the field. Increased interest among blacks and Hispanics are the second and third greatest changes. These increases are also among the most substantial of the fields. These rates of increase portend a substantial decline in the male and white domination of these fields. The increase in teachers' influence is the fourth greatest change, suggesting that teachers may be encouraging their students to pursue computer or engineering related field of study.

Agriculture/Home Economics/Vocational The slightly increased interest in this field was non-statistically significant. Changes in the predictor variables are reported in Table 3.21. The results show increased interest among women and blacks, a decline in aptitude but higher grades, more interest among general and vocational students and less interest among academic students, less science and foreign languages coursework, less parental but more teacher influence, increased importance of both money and work success, and increased counseling services.

Females show greater interest in this field, up 6.2 percentage points from 37.6 to 43.8; the log value is .153. The percentage of blacks rose by 3.7 percentage points, from 4.3 to 8.0, and the percentage of whites declined by 7.2 percentage points (from 92.9 to 85.7); the respective log values are .621 and -.081. Hence, blacks are slightly more likely to pursue this field of study in 1980 than they were in 1972, although both percentages are noticeably below the percentages overall black (6.1 and 10.5).

Aptitude declined by 2.47, from 52.60 to 50.13, a comparatively substantial decline. The percentage of general curriculum students interested in this field rose by 6.9 percentage points (from 30.1 to 37.0), the percentage of those in the vocational curriculum rose by 10.7 percentage points (from 19.5 to 30.2), and those in the academic curriculum declined by 17.5 percentage points (from 50.3 to 32.8); the respective log values are .206, .437 and -.428. Once again, interest among academic curriculum students declined while interest among vocational and general curriculum students increased. The percentage receiving high grades rose by 7.5 percentage points (from 39.3 to 46.3); the log value is .175. The number of science courses declined by .31 (from 3.74 to 3.43), and the number of foreign languages courses again declined by 1.32 (from 2.63 to 1.31).

The percentage noting a great deal of influence by parents declined by 10.0 percentage points (from 43.1 to 33.1), and the influence of teachers rose by 5.2 percentage points (from 10.1 to 15.3); the respective log values are -.264 and .415. However, parents continue to have most of the influence on future plans. Like students in many other fields, students pursuing this field increasingly value both money and work success. The former is up by 13.0 percentage points (from 14.5 to 27.5), and the latter is up by 5.9 percentage points (from 83.2 to 89.1); the respective log values are .640 and .069. Finally, students in this field report increases in both educational and employment counseling. The former is up by 9.4 percentage points (from 58.7 to 68.1), and the latter is up by 19.2 percentage points (from 27.8 to 47.0); the respective log values are .149 and .525.

The most substantial change among the predictor variables was the increased importance of money, and the second most substantial change was the increase in the percentage black (although the percentages black still fall short of the overall percentages black). The third greatest change was the more extensive availability of employment counseling, the fourth was the increased participation by those in the vocational curriculum, and the fifth was the decline among those in the academic curriculum. In short, the most salient changes among those selecting Agriculture/Home Economics/Vocational fields are the increased importance of money, the increased participation by blacks, the more substantial provision of employment counseling, and the increased participation by those in the vocational curriculum. Regarding those variables with means (i.e., without logs), aptitude declined substantially, as did the number of foreign languages courses; the number of science courses declined modestly.

Health The percentage interested in this field declined slightly between 1972 and 1980, by 2.8 percentage points (from 11.9 to 9.1). Changes in the predictor variables for this field are reported in Table 3.22. The results show increased interest among women and blacks, declines in SES and aptitude, greater interest among vocational and less interest among academic students, higher grades, more mathematics but less foreign languages coursework, less parental but more teacher influence, increased importance of both money and work success, and increased employment counseling.

The percentage of females rose by 4.6 percentage points (from 83.7 to 88.3); the log value is .054. Those selecting this field in 1980 have a mean SES score of .02, down by .13 from the 1972 value of .15. The percentage of blacks rose by 4.5 percentage points (from 7.1 to 11.6), and the percentage of whites declined by 6.7 percentage points (from 89.9 to 83.2); the respective log values are .491 and -.077. Both the values for blacks are slightly above the percentages overall black (6.1 and 10.5).

Aptitude declined by 1.99, from 53.46 to 51.47, a modest decline. The percentage of those in the academic curriculum interested in pursuing Health declined by 11.6 percentage points (from 69.1 to 57.5), and those in the vocational curriculum increased 7.7 percentage points (from 6.9 to 14.6); the respective log values are -.184 and .750. The results again reflect greater interest among non-academic students in fields traditionally pursued by academic students. The percentage of those with high grades again increased, by 7.5 percentage points (from 39.3 to 46.8), with a log value of .175. The number of mathematics courses rose by .27 (from 4.21 to 4.48), and the number of foreign languages courses declined by 1.21 (from 3.39 to 2.18). The increase in the number of mathematics courses may reflect the more stringent entry requirements for the Health field.

Parental influence declined by 16.4 percentage points (from 50.3 to 33.9), and the influence of teachers rose by 4.4 percentage points (from 8.4 to 12.8); the respective log values are -.395 and .421. The greater influence of teachers is again seen, as is the modest decline in parental influence. Money has again increased in importance, by 9.5 percentage points (from 11.4 to 20.9), and the importance of work success rose by 5.1 percentage points (from 89.4 to 94.5); the respective log values are .606 and .055. Finally, the provision of employment counseling rose by 14.9 percentage points (from 24.8 to 39.7), with a log value of .471.

The increased interest among the vocational curriculum students is the most substantial within this field. The increased importance of money is the second most substantial, the increase in the percentage black is the third, and the increase in employment counseling is the fourth. In short, the key changes reflect the broadening interest among those in the vocational curriculum and among blacks, the increased importance of money, and the increased provision of employment counseling and teacher influence. Regarding those variables with means (i.e., without logs), SES and foreign languages coursework declined modestly, while mathematics coursework increased considerably.

Summary Several conclusions emerge from these bivariate analyses of predictors of field of study selection. One is the definite heightened interest shown by women in seven of the nine fields, again a reflection of diminishing sex role stereotypes. Minority interest has also increased; interest among blacks was up in seven of the nine fields, as was interest among Hispanics in four of the fields (although increases have also occurred in overall percentages Hispanic and black).

The economic events of the decade have again appeared. Money was more important in all nine fields and increased employment counseling also appeared in all nine fields. Increased importance of work success was seen in seven fields. These results document the heightened sensitivity to economic and employment issues.

Declining academic aptitude and preparation are manifest in these analyses as well. Aptitude scores dropped in six of the fields, most noticeably in Education and Agriculture/Home Economics/Vocational. The percentage in the academic curriculum dropped in eight fields, with corresponding increases in the general and vocational curricula. Foreign languages coursework was down in all nine fields. However, grades increased in six fields. In short, the results again reflect a broadening of the academic aptitude and background of those planning to study various fields of study.

Like the occupation results, parental influence declined in most of the fields. Correspondingly, teachers' influence was up in seven of the fields. There seems to have occurred a slight shift in the balance of influence towards school personnel, although parents retain the bulk of the influence.

Several variables saw little change over the decade. SES declined in three fields. Mathematics coursework was up somewhat in three fields, although hardly any changes occurred in English and science coursework. Self-concept and locus of control also changed little. In short, the results parallel those for the occupation analyses. Once again, the results seem to be linked to the major events of the decade: expansion of opportunities for women and minorities, declining academic aptitude and commitment, declining influence of the family, and economic and labor difficulties.

These analyses have highlighted the separate changes that have occurred in the independent variables in each occupation and field category. The next section incorporates the cohort effect in a multivariate analysis of these variables, again within each occupation and field category.

Subtopic 3: Multivariate Analyses

This section reports the results of the multiple regression analyses. Multiple regression analysis was used to overcome a key limitation of the the bivariate analyses reviewed above: such analyses fail to account for the linkages among the predictor variables themselves. Also, since cohort is a key variable, multiple regression analysis affords an assessment of the effects of the predictor variables net of cohort effects as well as an assessment of the effects of the cohort effect net of the other variables.

Only those variables which were significant for at least one of the categories were included in the regression analyses. Hence, the following variables were deleted from the occupation analyses: locus of control, importance of money, educational counseling, influence of counselors, influence of parents, number of English courses, the year-Hispanic interaction effect, and the year-SES interaction effect. Variables deleted from the field of study analyses include: Hispanic, locus of control, importance of work, importance of money, educational counseling, employment counseling, influence of counselors, influence of parents, the year-Hispanic interaction effect, the year-black interaction effect, and the year-SES interaction effect. Cohort is included in all the equations as the "Year" variable (0=1972 and 1=1980). Each occupation and field of study category was transformed into a dichotomous dummy variable, with 1 = selecting that category. Only those variables significant at .01 or less will be examined. The focus will be on the metric coefficients, and the betas will be used to rank order the effects of the predictor variables.

The interaction coefficients and the adjusted main effects were used, in conjunction with the coefficients for the other variables, to calculate estimated values for the dependent variables (i.e., selecting an occupation or field). This procedure yielded estimated values for each combination of the interaction term. For example, the year-sex interaction term yielded estimates for 1972 males, 1980 males, 1972 females, and 1980 females. Further details are reported in Chapter 2 (Methods). The regression analyses for planned occupation are reported in Table 3.23 and the analyses for intended field of study are reported in Table 3.24. The predicted values based on the interaction terms are reported in Table 3.25 for occupation and Table 3.26 for field of study.

Planned Occupation

Professional 2 The value of -.028 for sex indicates that females are slightly less likely to select this occupation. The values of .060 and .071 for Hispanic and black respectively indicate that both minorities are slightly more likely to select this occupation. A coefficient of .030 for SES indicates that those from higher socioeconomic status backgrounds are slightly more likely to select a Professional 2 occupation. The value of .059 for curriculum indicates that those in the academic curriculum are slightly more likely to select this occupation. The value of .021 for grades indicates that, to a minor extent, those with high grades are more likely to select this occupation. The value of .021 for the number of science courses indicates that, to a minor extent, those completing more science courses are more likely to select this occupation. The greater provision of employment counseling predicts a slightly lower likelihood of selecting this occupation (-.017). Year has a coefficient of .028, indicating that 1980 seniors are slightly more likely to select this occupation.

The results for the interaction effects show that both the year-sex and the year-aptitude coefficients (.082 and .002 respectively) are statistically significant (see Table 3.25). The opposite signs for the sex and the year-sex coefficients suggests a decline in the sex differences between the two cohorts. The predicted values support this conclusion: male-1972 (.134) versus female-1972 (.069), and male-1980 (.132) versus female-1980 (.140). The results show a decline in the differences between males and females over the two cohorts. The results for year-aptitude reflect the growing importance of aptitude: 1972 (.106) and 1980 (.136).

An examination of the beta values enables a comparison of the relative importance of these variables. Aptitude has the highest beta (.13), number of science courses the second highest (.11), and curriculum and SES both have a beta of .08. Hence, the number of science courses completed and aptitude are the most strongly related to selecting a Professional 2 occupation, and location in the academic curriculum and SES are also important. Both black and year-sex have betas of .06. Since SES is often related to many of the other variables, the results underscore the unique contribution of these variables. Selecting a Professional 2 occupation remains primarily a function of aptitude and science coursework as well as socioeconomic status and academic curriculum membership, but the positive coefficients of Hispanics and blacks indicate that minorities are increasingly likely to plan on a Professional 2 occupation. The beta of .04 for year indicates that more seniors aspired to this occupation in 1980 than in 1972. The R^2 value for this equation is .121.

Professional 1 The coefficient of .047 for sex indicates that females are more likely to aspire to a Professional 1 occupation. Members of both minority groups are also more likely to aspire to this occupation (.045 for Hispanic and .100 for black). The coefficient for SES is .026; those of higher socioeconomic status backgrounds are slightly more likely to aspire to this occupation. Location in the academic curriculum also favors planning on a Professional 1 occupation (.085). Teachers' influence has a value of .026, indicating that those experiencing a great deal of teacher influence are slightly more likely to plan on this occupation. However, employment counseling has a value of -.030, indicating that the provision of such counseling has a slight negative effect.

All three of the interaction effects are statistically significant: year-sex (.066), year-black (-.048), and year-aptitude (.003). The fact that both the coefficients for sex and year-sex are positive indicates an increase in the sex difference between the two cohorts. The predicted values support this conclusion (see Table 3.25): male-1972 (.257) versus female-1972 (.265), and male-1980 (.239) versus female-1980 (.315). In short, females are increasingly more likely than males to select a Professional I occupation, reflecting the enhanced opportunities for women in this occupational category. The opposite signs for the black and year-black coefficients suggests a decline in the differences between blacks and whites, and the predicted values support this conclusion: black-1972 (.366) versus white-1972 (.239), and black-1980 (.341) versus white-1980 (.262). In short, blacks continue to exceed whites in their preference for this occupation, although the gap has narrowed considerably. Finally, the results for the year-aptitude interaction effect suggest a greater role of aptitude in 1980 (.287 predicted value) than in 1972 (.260 predicted value).

In short, the results document the role of such individual level variables as sex, minority group status, and SES for selecting a Professional I occupation; school experience variables such as curriculum location and teacher influence are also quite salient. The beta values indicate that aptitude and curriculum are the most important, both with positive signs (.10 and .09 respectively). The values for black and sex are also positive (.07 and .05). Together these results highlight the importance of individual background variables. The R^2 for this equation is .047.

Technical The coefficient for sex is -.034, indicating that females are slightly less likely to select this occupational category in 1980 than in 1972. The coefficient for black is .013, indicating a very slight preference among blacks for this category. Work success has a coefficient of .017, reflecting the slight positive effect on selecting a Technical occupation. The coefficient of .024 for year indicates that slightly more seniors planned on a Technical occupation in 1980 than in 1972.

The fact that sex and year-sex both have negative coefficients suggests a widening of the sex difference between the two cohorts. The predicted values support this conclusion (see Table 3.25): male-1972 (.072) versus female-1972 (.054), and male-1980 (.108) versuspational categories. The work success coefficient is the highest, the year-black interaction effect is tied for second highest, and the year-sex interaction effect is the third highest negative coefficient. In comparison to the other occupations, then, the importance of success in work and the two interaction effects (year-black and year-sex) are particularly predictive of selecting a Technical occupation. In short, few of the coefficients are e the decade has seen a movement towards blacks increasingly preferring a Technical occupation over whites.

An examination of the betas reveals that sex and number of mathematics courses are the most salient (-.06 and .05 respectively), underscoring the greater likelihood of males to select this occupation and reflecting the importance of mathematics training. None of the remaining betas were .05 or greater. The R^2 for this equation is .014, a low amount of variance explained.

Teacher The coefficient for sex is .064, indicating that females are more likely to select this occupation. The coefficient of .056 for curriculum indicates that academic curriculum students are slightly more likely to select a Teacher occupation. This value undoubtedly reflects the fact that entry into a teaching program requires at least some preparation in academic areas. The value for teachers' influence is .071, the highest coefficient for this variable among the occupations, reflecting the positive effect of such influence on selecting a Teacher occupation. Perhaps a modeling effect occurs such that those planning on a Teacher occupation are particularly influenced by people in that field. Finally, the year coefficient is -.069, the strongest negative coefficient among the occupations, reflecting reduced interest in teaching between 1972 and 1980. Undoubtedly this decline is due to greater opportunities in other fields, the declining status of teaching, and low salaries.

The year-sex interaction coefficient is -.041, and the opposite signs between this coefficient and the sex coefficient suggests a decline in the sex difference between the two cohorts. The predicted values support this conclusion (see Table 3.25): male-1972 (.053) versus female-1972 (.140), and male-1980 (.030) versus female-1980 (.062). While females continue to prefer a Teacher occupation over males, the difference has narrowed considerably, reflecting females' greater interest in other fields. The year-black interaction coefficient is -.048, and the similarity in signs between this coefficient and the black coefficient suggests a change in the differences between blacks and whites. The predicted values support this conclusion: black-1972 (.122) versus white-1972 (.102), and black-1980 (.037) versus white-1980 (.037). In short, the greater preference by blacks in 1972 was eliminated by 1980. The results show a greater decline among blacks than among whites. The year-aptitude interaction coefficient is -.004, and the predicted values show a decline in the role of aptitude: 1972 (.104) and 1980 (.034).

Hence, selecting a Teacher occupation seems to be primarily a product of sex and the two interaction effects, as well as teacher influence. The betas for two of these variables, year and sex, are the strongest (-.13 and .12 respectively), further supporting the conclusions noted above. The betas for curriculum and teachers' influence are .10 and .09, also documenting the substantiveness of these effects. The R^2 for this equation is .064, a relatively low amount of variance explained.

Manager/Proprietor The coefficient for sex is -.050, reflecting less interest among females in a Manager/Proprietor occupation. The coefficient of .032 for SES reflects greater interest among higher socioeconomic status seniors in this type of occupation. Teachers' influence is negative (-.018); to a minor extent, those experiencing greater teacher influence are slightly less likely to select this occupation. Finally, the coefficient of .075 for year reflects greater interest in this occupation in 1980 than in 1972.

In short, selecting a Manager/Proprietor occupation seems mostly dependent on sex, SES, teachers' influence (negative), and year. Inspection of the betas shows the year value to be the most substantial (.13), followed by sex (-.09) and SES (.08). The results underscore the cohort effects and the relevance of the background variables of sex and SES. The R^2 value for this equation is .032, a comparatively low level of variance explained.

Craftsman/Operative The coefficient for sex is -.200 reflecting the male-dominance of this occupation. The negative coefficients for Hispanic and black (-.041 and -.067) reflect lower interest in this occupation among minorities. Lower SES seniors are also more likely to select this category, as reflected by the coefficient of -.031. Two school-related variables are also negatively related to selecting this occupation: curriculum (-.055) and grades (-.028). Those planning this occupation are more likely to come from the general and vocational curricula and receive lower grades (-.055 and -.028 respectively). Finally, the year coefficient is -.017, reflecting a slight decline in this occupation over the last decade.

The year-sex interaction coefficient is -.018, and the fact that the sign for this and the sex coefficients are both negative suggests a widening of the sex difference between the cohorts. The predicted values support this conclusion (see Table 3.25): male-1972 (.219) versus female-1972 (.029), and male-1980 (.211) versus female-1980 (.003). The results show a decline in interest among females, which accounts for the increased sex difference.

Apparently Craftsman/Operative occupations are still selected predominantly by white, lower SES males who are in the general and vocational curricula, and who receive lower grades. SES is normally related to several of these other variables; the unique effect underscores the separate contribution of each to selecting this occupation. Inspection of the betas indicates that sex is clearly the most salient variable (-.30). Other relatively high-ranking betas include aptitude (-.09), curriculum

(-.08), SES (-.07), black (-.06), and grades (-.06). With the exception of the aptitude beta, the results parallel the analysis above. The aptitude beta shows a modest positive effect; in addition to being male, white, of lower SES, in the general and vocational curricula, and having lower grades, those aspiring to a Craftsman/Operative occupation also have somewhat lower levels of aptitude. The R^2 value for this equation is .160, the highest of such values.

Clerical/Sales The coefficient for sex is .195, the highest among the occupations, indicating that females are substantially more likely to select a Clerical/Sales position. Blacks are somewhat less likely to plan on a Clerical/Sales occupation, as reflected in the coefficient of -.030. Those of lower SES background are slightly more likely to select this occupation also, as indicated in the coefficient of -.022. Also, those in the general and vocational curricula are more likely to plan on this type of occupation (-.088), as are those with higher grades (.026). Greater teacher influence has a slight negative effect on the propensity to select this occupation (-.023). The provision of employment counseling also heightens the likelihood of selecting this category (.050). Apparently the provision of employment counseling is more relevant for those interested in Clerical/Sales positions. Finally, the percentage interested in this occupation declined slightly between 1972 and 1980 (-.065).

The year-sex interaction coefficient is -.054, and the difference in sign between this coefficient and the sex coefficient suggests a decline in the sex difference between the cohorts. The predicted values support this conclusion (see Table 3.25): male-1972 (.054) versus female-1972 (.279), and male-1980 (.014) versus female-1980 (.185). The results suggest that interest among females in this occupation declined substantially between 1972 and 1980. The year-black interaction coefficient is .055, and the opposite signs for this and the black coefficients suggest a decline in race differences between the two cohorts. The predicted values support this conclusion: black-1972 (.114) versus white-1972 (.175), and black-1980 (.097) versus white-1980

(.103). Although whites are still more likely to select this occupation, the gap has narrowed considerably.

In short, selecting a Clerical/Sales occupation is dependent primarily upon being female, being in the general and vocational curricula, not being black, having higher grades, and having experienced employment counseling. The year variable and the interaction effects are also relevant; more recent graduates are less likely to select this occupation, and the greater interest among females and blacks has declined.

Inspection of the betas underscores the primary importance of sex (.27) and curriculum (-.12). Modest betas exist for year (-.09), employment counseling (.07), and number of science courses (-.07). This latter value indicates that those with fewer science courses are more likely to select a Clerical/Sales occupation; the rest of the betas underscore the conclusions noted above. The R^2 value for this equation is .154, the second highest among the equations.

Service The coefficient for sex is .050, indicating that females are somewhat more likely to select a Service occupation. Blacks are less likely to select a Service occupation (-.038). General and vocational curriculum students are slightly more likely to plan on a Service occupation (-.015), and those who experienced more teacher influence are slightly less likely to select this occupation (-.021). Finally, the percentage planning on a Service occupation declined somewhat between 1972 and 1980 (-.027).

The sex-interaction coefficient is -.023, and the difference in sign between this coefficient and the sex coefficient suggest a decline in the sex difference between the two cohorts. The predicted values support this conclusion (see Table 3.25): male-1972 (.047) versus female-1972 (.110), and male-1980 (.031) versus female-1980 (.071). While females still clearly exceed males, the gap has narrowed somewhat. These results suggest that many females are now selecting occupations other than a Service occupation. The year-black interaction coefficient is .027, and the sign for the black coefficient, suggesting a decline in the difference between whites and blacks over the two cohorts. The predicted values support this conclusion: black-1972 (.031) versus white-1972 (.084), and black-1980 (.027) versus white-1980 (.053). The results show that the greater preference among whites continues, although noticeably reduced.

Inspection of the betas indicates that the value for sex (.10) is clearly the greatest. The beta for aptitude is second (-.07), and the beta for year is third (-.05). The negative beta for aptitude indicates that, net of the other variables, those with lower aptitude scores are slightly more likely to select a Service occupation. In short, selecting a Service occupation is primarily a function of sex, being white, and teacher influence; the year variable and the interaction effects reflect a slight overall decline in interest in this category, as well as a decline in interest among women and an increased interest among blacks. The R^2 value for this equation is .035, a small amount of variance explained.

Farmer/Laborer The coefficient for sex is -.064, showing greater interest among males in a Farmer/Laborer occupation. Those from lower SES backgrounds show somewhat less interest in this occupation (-.013), and Hispanics are slightly less likely to be interested in this occupation (-.028), as are blacks (-.045). The year-sex interaction coefficient is -.018, and the similarity in sign between this coefficient and the sex coefficient reflects a change in the sex difference between the two cohorts. The predicted values do reflect a slight change: male-1972 (.061) versus female-1972 (.007), and male-1980 (.079) versus female-1980 (.015). Interest among both sexes increased slightly, although males still prefer this occupation to a far greater extent than do females.

Using betas to rank order the effects of the variables, sex is the most important (-.16), black is second (-.07), aptitude is third (-.06), and SES is fourth (-.05). Although the metric coefficient is negligible, the negative beta for aptitude indicates that those aspiring to a Farmer/Laborer position have slightly lower aptitude scores. In short, selecting a Farmer/Laborer is largely dependent on sex and minority group status; future farmers and laborers are most likely to be male and white. The R^2 value for this equation is .047; about 5% of the variance is explained.

Military The coefficient for sex is -.023; males are slightly more interested in this occupation. Blacks are also slightly more interested (.017). The year-black interaction coefficient is .030, and the similarity in sign between this and the black coefficient suggest a widening gap between blacks and whites. The predicted values support this conclusion: black-1972 (.015) versus white-1972 (.015), and black-1980 (.048) versus white-1980 (.018). To a modest extent, blacks have shown increased interest in this field while the interest shown by whites has remained stable. The two largest betas are for sex (-.08) and for black (.04). Hence, few variables predict selecting a Military occupation, and this is reflected in the low variance explained (R^2=.011). The key factors are being male and black.

Housewife As expected, the coefficient for sex is positive, although quite low (.04). Blacks show slightly less interest in this occupation (-.025), as do Hispanics (-.021). The coefficient for year is .015, reflecting a slight increased interest in becoming a Housewife. Finally, the coefficient for the importance of success in work is -.037; those who value success less are slightly more likely to plan on becoming a Housewife. Perhaps this is the case because Housewife is not often defined as an occupation, and not often defined as an occupation in terms of work success.

The year-sex interaction coefficient is .040, and the similarity in sign between this coefficient and the sex coefficient suggests a widening of the gap between the sexes. The predicted values support this conclusion: male-1972 (.004) versus female-1972 (.026), and male-1980 (.001) versus female-1980 (.061). Females have shown somewhat greater interest in this occupation between 1972 and 1980. The year-black interaction coefficient is -.020, and the similarity in signs between this coefficient and the black coefficient suggests a widening race difference. The predicted values support this conclusion: black-1972 (.004) versus white-1972 (.017), and black-1980 (.001) versus white-1980 (.035). While interest among blacks remains quite low, interest shown by whites has increased modestly.

Sex has the greatest beta (.14) and the importance of success in work has the second greatest (-.09). The year-sex interaction effect beta is third at .07, the beta for black is -.05, and the beta for year is .05. In short, the analysis of betas underscores the analysis of the metric coefficients. Selecting Housewife as a future occupation is largely dependent on sex and minority group membership. Also important is the negative role of the importance of success in work. The R^2 value for this equation is .044, a low amount of variance explained.

Summary Several conclusions emerge from these multivariate analyses of factors predicting selection of occupation. First, the amount of variance explained for all occupations is relatively low. The highest amounts are for Craftsman/Operative (.160), Clerical/Sales (.154), and Professional 2 (.121); the amounts explained for the remaining occupations are considerably lower. Hence, a variety of other factors must be included in order to improve our understanding of why seniors select a given occupation. Such factors might include actual experience in a related occupation, actual occupation of parents or a close friend, knowledge about a selected occupation as well as about occupations generally, religious values, stage of occupational decision-making, and psychological traits. The results clearly suggest that the background variables, school-related variables, and family formation variables do not provide a parsimonious explanation of occupational selection.

Second, the results clearly document the importance of a few variables over the other variables. The number of betas .05 or greater, a very conservative arbitrary indicator of substantive significance, was used to identify the most salient variables. Sex clearly is the most salient variable with ten such values. The results show clearly that most occupations remain sex-role stereotyped in terms of student preference.

However, the relatively low betas for several occupations suggests that these occupations will be somewhat less sex dominated in the future. Aptitude has six betas at .05 or greater, indicating a connection between aptitude and occupational selection. Black and year both have five betas in this range, reflecting some race differences as well as cohort differences. Curriculum also has five betas in this range, and SES has four. In short, the variables with the greatest effects across the occupations are demographic variables, variables over which individuals and school personnel have little influence. These results also suggest that occupational decision-making is largely a product of the early socialization experienced as male or female, black or white, or from high or low socioeconomic status backgrounds.

Third, the interaction effects are minimal. The purpose in combining the two cohorts into one set of analyses was to examine the interaction effects for several of the variables with cohort. While cohort itself has five betas .05 or greater, only two of the year-sex betas are in this range, only one of the year-aptitude interaction effects is in this range, and none of the year-black interaction effects are in this range. In short, cohort has a modest effect by itself but a negligible effect through other variables.

Fourth, a variety of variables fail to attain substantive significance. For example, self-concept was expected to have a substantial effect in at least several occupations, although none of the betas were .05 or greater. Perhaps the effect of self-concept is carried through SES, sex, or some of the other variables. None of the coursework variables emerged as important, also some were expected to given the importance of academic preparation for several fields (such as Professional 2). The two types of counseling services variables were also unimportant, as was teacher influence. It appears that any effect these variables may have are transmitted through the variables with substantively significant effects, such as sex, race, aptitude, SES, and year.

Intended Field of Study

Preprofessional The coefficient for sex is -.032; females are slightly less likely to select a Preprofessional field. Blacks are somewhat more likely to select a Preprofessional field, as indicated by the coefficient of .059. SES is minimally positively predictive of selecting this field (.028), as is location in the academic curriculum (.026). Self-concept has a minimal positive coefficient (.020), as does aptitude (.003). Slightly fewer seniors selected the Preprofessional field in 1980 than in 1972 (-.028).

The year-sex interaction coefficient is .005, a negligible though statistically significant effect. The predicted values support the relative absence of change between cohorts (see Table 3.26): male-1972 (.134) versus female-1972 (.100), and male-1980 (.104) versus female-1980 (.074). In both years, males show slightly more interest in this field. The year-aptitude interaction coefficient is -.003, and the predicted values reflect a slight decline in the importance of aptitude: 1972 (.117) and 1980 (.089). As indicated by the sign, the importance of aptitude has declined slightly.

Aptitude and number of science courses have the highest betas (.08), both modestly positive. These positive linkages are understandable given the rigorous academic demands of Preprofessional programs. The next strongest positive beta is for SES (.07), substantiating the generally supported conclusion that Preprofessional fields attract primarily higher socioeconomic status students. The betas for black, self-concept, and the year-sex interaction effect are .05, .05, and ,04 respectively, substantiating the analysis of the metric coefficients above. The strongest negative betas exist for three variables: sex, year, and the year-aptitude interaction effect (.05, .05, and .04 respectively). The results substantiate those noted above.

In short, selecting a Preprofessional field of study is primarily dependent upon being male, being black, having a higher socioeconomic status background, higher self-concept, higher aptitude, and completing more science courses. Interest in this field declined somewhat between 1972 and 1980. However, most of these coefficients are modest, and the R^2 value for this equation is .056.

Humanities/Arts The coefficient for sex is .025; females show slightly greater interest in the Humanities/Arts. Aptitude has a minimally positive effect (.003). Those in the academic curriculum also show greater interest (.028), as do those who completed more English and foreign languages courses (.032 and .012 respectively) but fewer mathematics and science courses (-.021 and -.026 respectively). Finally, teacher influence is moderately positive (.068).

The year-sex interaction coefficient is -.039, and the difference in sign between this coefficient and that for sex suggest a declining sex difference between the two cohorts. The predicted values support this conclusion (see Table 3.26): male-1972 (.126) versus female-1972 (.173), and male-1980 (.152) versus female-1980 (.160). The results also show a slight increase for males and a slight decrease for females; however, the changes are quite small. The coefficients for year and for the year-aptitude interaction coefficient were not statistically significant.

The most substantial betas are the negative betas for number of science and mathematics courses (-.14 and -.10 respectively), underscoring the tendency for Humanities/Arts students to avoid such courses. Similarly, the strongest positive betas are for the number of foreign languages and English courses completed (.07 and .08 respectively), underscoring the similarity between background coursework and intended field of study in college. The beta for teacher influence is also positive (.07), showing that future Humanities/Arts students are particularly influenced by teachers. The beta for aptitude is .06.

In short, selecting the Humanities/Arts field is largely dependent upon being female and in the academic curriculum, having higher aptitude scores, greater teacher influence, more coursework in English and foreign languages, and less coursework in mathematics and science. However, the coefficients are modest, and the R^2 value for this equation is .047.

Education As expected, females are still more likely to select Education (.079). Blacks are somewhat less likely to select this field (-.060), as are those with higher aptitude scores (-.003). The results for teacher influence (.054) substantiate the modeling effect noted above. The coefficient of -.058 for year reflects declining interest in Education. The year-sex interaction coefficient is -.053, and the predicted values reflect a declining sex difference (see Table 3.26): male-1972 (.070) versus female-1972 (.179), and male-1980 (.039) versus female-1980 (.117). Females remain more interested in Education but their lead has narrowed somewhat.

The strongest beta is for sex (.14), and the beta for teacher influence is the second strongest positive beta (.06). The most substantive negative beta is for year (-.10), followed by aptitude (-.07), black (-.06), and the year-sex interaction coefficient (-.05). Selecting Education is largely dependent upon being female, not being black, and having experienced greater teacher influence. The negative coefficient for aptitude indicates that those with lower scores are slightly more likely to select Education as a field of study. Finally, the year and the year-sex interaction coefficients reflect declining interest in Education, especially among among women. The R^2 value for this equation is .043, a low level of variance explained.

Business Women show slightly less interest in the field of Business (-.043), although overall, students show greater interest (.090). Those with higher grades show slightly greater interest, perhaps reflecting the increased competitiveness regarding entry into a Business field of study. However, those in the academic curriculum are slightly less likely to plan on this field (-.061); perhaps the vocational curriculum provides more appropriate preparation. Teacher influence is negative (-.046), as are number of science courses (-.028), and aptitude (-.003). Mathematics coursework is minimally positive (.011). The year-sex interaction coefficient is .086, and in conjunction with the sex coefficient the predicted values reflect a substantial narrowing of the gap (see Table 3.26): male-1972 (.181) versus female-1972 (.074), and male-1980 (.182) versus female-1980 (.221). In short, interest among males has remained quite stable while interest among females has increased dramatically.

The negative effect of science courses is underscored by its beta (-.14), the strongest beta value. The next highest beta value is for year (.12), reflecting the increased interest in this field. The next strongest betas are the negative values for curriculum (-.08) and aptitude (-.07). Next come sex (-.06) and the year-sex interaction term (.06). The beta values generally support the analysis of the metric coefficients: selecting Business as a field of study is largely dependent upon being male, membership in the general and vocational curricula, experiencing less teacher influence, and completing fewer science courses. The results for year and the year-sex interaction effect show growing interest in the field, especially among women. The modest negative beta for aptitude indicates that future Business students have slightly lower aptitude scores. However, most of the coefficients (both the metric and beta) are moderate, and the R^2 value for this equation is .058.

Social Science The coefficient of .026 for sex indicates slightly greater interest among females in the Social Sciences. The year coefficient of -.025 reflects a slight decline in interest in this field, perhaps due to the greater employment opportunities in other fields. Blacks are slightly more likely to select this field (.030), as are those in the academic curriculum (.028). The coefficient for grades is minimally negative (-.019), indicating that those with lower grades are slightly more likely to select Social Science. The coefficient for aptitude is minimally positive (.002). The year-sex interaction coefficient is .055, and the predicted values reflect an increased gap between men and women (see Table 3.26): male-1972 (.097) versus female-1972 (.092), and male-1980 (.044) versus female-1980 (.094). The results show a stable level of interest among females but a sharply declining level of interest among males. Apparently more females remained interested in this field given its focus on working with people, while men shifted to other occupations that paid more.

The most salient variables, as indicated by betas, are aptitude (.06), sex (.04), curriculum (.05), grades (-.04), number of mathematics courses (-.05), year (-.04) and year-sex (.05). In short, selecting Social Science is primarily dependent upon being female, academic curriculum location, being black, having higher aptitude scores but lower grades, and completing fewer mathematics courses. The social sciences have long been preferred by females, and the year-sex interaction coefficient suggests that the sex gap has widened between 1972 and 1980. Interestingly, the beta for grades is negative while the beta for aptitude is moderately positive; apparently Social Science attracts those with slightly greater aptitude but who do not perform as well in terms of school standards. However, these coefficients (both metric and beta) are moderate, and the R^2 value for this equation is .017.

Biology/Physical Science/Mathematics The coefficient for sex is -.022, reflecting slightly less interest in these fields among females. Perhaps some females still see these fields as traditionally male, and therefore are still less likely to be interested in them. The year coefficient (-.017) reflects a slight decline in interest in these fields between 1972 and 1980. The number of English courses completed is negative (-.015), the number of science courses completed is positive (.019); aptitude is minimally positive (.002). These results simply reflect the science background prerequisite for entry into these fields in college. Neither of the two interaction terms are statistically significant.

The number of science courses, aptitude, and number of mathematics courses have the strongest positive betas (.14, .05, and .04, respectively), while the number of

English courses and sex have the strongest negative values (-.05 and -.04 respectively). In short, selecting Biology/Physical Science/Mathematics is primarily dependent upon being male, having greater aptitude, and completing more science and mathematics courses but fewer English courses. The results reflect the importance of aptitude and training in science and mathematics for entering these fields, and show that these fields are still primarily selected by males. However, the coefficients are modest, and the R^2 value for this equation is .041.

Computer/Engineering/Architecture The negative coefficient for sex (-.150) reflects a clear domination of males interested in these fields. The year coefficient of .072 suggests growing interest in these fields. Aptitude is minimally positive (.002), and blacks show slightly greater interest in these fields (.036). Mathematics coursework is positive (.028), while English and foreign languages coursework are both negative (-.021 and -.011 respectively). The year-sex interaction coefficient is -.058, and the similarity in sign between this coefficient and the sex coefficient suggests a widening of the gap over the last decade. The predicted values support this conclusion (see Table 3.26): male-1972 (.140) versus female-1972 (.023), and male-1980 (.242) versus female-1980 (.038). While interest among females increased to a modest extent, the increase for males was far more substantial. What has long been a male-dominated field has become even more so. The year-aptitude interaction coefficient is .004, and the similarity in sign between this coefficient and the aptitude coefficient reflects the increased role of aptitude in 1980. The predicted values support this conclusion: 1972 (.081) versus 1980 (.153). The greater importance of aptitude may reflect more competition for the limited number of spaces in these fields, particularly computers.

The beta for sex (-.23) parallels the strength of the metric coefficient, and is the largest beta value. The second largest value is for mathematics coursework (.15), and the third largest is for year (.11). The beta for black is .10. The betas for English and foreign languages are -.05 and -.07 respectively. Finally, the year-aptitude beta is

.05 and the year-sex beta is -.04. In short, selecting this field is largely dependent on being male, and interest has increased between the two cohorts; the year-sex interaction effect suggests even greater interest among males over time. Also important is mathematics training, reflecting the academic demands of these fields; foreign languages and English are negative predictors. Finally, blacks show slightly greater interest in these fields. However, most of the coefficients are moderate, and the R^2 value for this equation is .116.

Agriculture/Home Economics/Vocational The coefficient for sex is -.042, reflecting slightly greater interest among males. Blacks show less interest in these fields (-.039), as do those in the academic curriculum (-.047). Neither of the interaction effects is statistically significant. The results include only three coefficients that are even moderately related to selecting this field of study: sex (-.042), curriculum (-.047), and black (-.039). Sex and curriculum have the two most substantial beta values (both -.08), followed by black (-.06). Selecting this field of study is primarily dependent upon being male, in the general or vocational curriculum, and not being black. However, these coefficients are moderate, and the R^2 value for this equation is .042.

Health The coefficient for sex (.158) indicates substantially greater interest among females in Health. The coefficient for year (-.036) reflects a slight decline in interest in this field between 1972 and 1980. Blacks are somewhat less likely to select this category (-.030), as are those with higher socioeconomic status backgrounds (-.017). Teachers' influence is negative (-.037), and the number of science courses is positive (.029); English coursework is negative (-.011). Those with higher aptitude scores are also less likely to select Health (-.004). The year-sex interaction coefficient is -.045, and the difference in sign between this coefficient and the sex coefficient suggests a narrowing of the sex difference over the two cohorts. The predicted values support this conclusion (see Table 3.26): male-1972 (.038) versus female-1972 (.221), and male-1980 (.025) versus female-1980 (.163). In short, interest among males declined slightly while interest among females declined somewhat more.

The beta values generally support the metric coefficient analysis. The beta for sex is the strongest (.26), while the beta for science coursework is the second strongest (.17). The beta for aptitude is the strongest negative beta (-.09), reflecting lower interest among those with higher aptitude scores. The beta for year is -.06. In short, selecting a Health field of study is primarily dependent upon being female (although this interest among females has declined slightly between 1972 and 1980), having lower aptitude scores, experiencing less teacher influence, and completing more science courses. However, the coefficients are modest, and the R^2 is .088.

Summary Several conclusions emerge from these multivariate analyses of predictors of field of study. First, the levels of variance explained are low, with the highest being 11.6%. Most are under 6%. Clearly, factors other than those examined above are relevant for selecting a field of study. Such factors might include fields studied by siblings already in college, type of college attended, intended fields of closest friends, stage of occupational decision making, and various psychological traits.

Second, some variables are clearly more relevant than others. Using the the number of betas .05 or greater as an indicator, aptitude and sex are the most relevant variables. Mathematics coursework, science coursework, and year all have five betas in this range, and black has four. Hence, three of the most relevant variables--sex, aptitude and black--are demographic and background variables, variables over which school personnel have no control. These results reflect the importance of these background variables for selecting an intended field of study. The relative importance of mathematics and science coursework underscores the differential importance of both types for field of study selection. Fields have very different coursework preparation requirements, which may be reflected in these data. The relative importance of year simply reflects some of the shifts in interests among seniors, from such fields as

Education and Health to such fields as Business and Computer/Engineering/ Architecture. All of these substantively important variables have differential effects across the various fields; instead of having a uniform effect, these variables are differentially relevant given the characteristics of both the fields and the students.

Third, while the results for the year-aptitude interaction effect were negligible, several of the year-sex interactions coefficients were substantively important. These results reflect both the expansion and contraction of the sex differences between 1972 and 1980. The results show a decline in interest among females in such fields and Education and Health along with an increased interest among females in such fields as Business and Computer/Engineering/Architecture (cf. Herzog, 1982; Rumberger, 1982).

Fourth, the results highlight the unimportance of several variables. For example, grades has a negligible effect, as do SES and self-concept. Yet these variables are frequently thought to affect such outcomes as field of study selection. Perhaps their effects, particularly for SES, are carried through such variables as curriculum, aptitude, and coursework. Nonetheless, it is interesting to note that self-concept and grades, as well as SES, have few direct connections with intended field of study.

These results help understand some of the changes associated with the altered occupational and field of study preferences among adolescents. The next chapter turns to an analysis of factors associated with successful pursuit of these choices.

CHAPTER 4

Research Issue 2: Attainment of Occupational Aspirations and Intended Field of Study

The previous chapter examined the changes that have occurred between 1972 and 1980 regarding the occupation and field of study choices of adolescents, as well as the changes that have occurred in several predictor variables. This chapter turns to an examination of the success adolescents experience in their pursuit of their occupation and field of study choices. Three subtopics will be addressed. The first examines the success rates for each of the occupation and field of study categories. The second involves bivariate analyses of the linkages between the predictor variables and successful pursuit of each of the occupational plans and intended field of study categories, and the third involves multivariate analyses of the predictor variables as they relate to successful pursuit of each category.

Subtopic 1: Success Rates

A variety of measures could be used for successful pursuit of occupation and field of study. Successful pursuit of occupation was defined as having actually worked in the planned occupation at any time. This approach gives respondents the maximum chance of having successfully attained their planned occupation and also overcomes the measurement problems incurred in specifying a restricted time period. For field of study, only the last two follow-ups were used in order to give respondents the maximum time to complete their degrees. Hence, successful pursuit was determined by matching the intended field of study code with the code of the area in which a degree was actually obtained. Both these measures provide a means for assessing how successfully adolescents pursue their plans.

Before analyzing the factors associated with successful pursuit, it is first necessary to present and analyze the success rates for the various occupational and field of study categories. Doing so may illuminate some of the differences among the categories and may help determine if occupational decision making theory or opportunity structure theory is more relevant (cf. Chapter 1).

The results for the first subtopic are reported in Table 4.1. The highest success rate for planned occupation is found among those planning to be housewives (96%). Next are the Craftsman/Operative and Clerical/Sales categories (84.5% and 83.0% respectively). These high success rates may reflect the relative ease of entry into and availabilty of jobs in these areas. Those in the Military, Farmer/Laborer, and Service categories have similar success rates (58.3%, 57.6%, and 53.7% respectively). Again, the relative ease of entry into these occupations, particularly the Service and Farmer/Laborer categories, and the relative availablity of jobs may account for these high success rates. Those pursuing Managerial/Proprietor occupations had a success rate of 37.7%, and the remaining categories had somewhat lower success rates. For those planning to become a Teacher, 29.3% were successful; 27.9% of those planning on a Professional 1 occupation were successful; 27.0% of those planning on a Technical occupation were successful; and 21.4% of those planning on a Professional 2 occupation were successful.

The results suggest that the less difficult the entry into an occupation and the more widespread the availability of jobs, the higher the success rates. Hence the high success rates for the Craftsman/Operative and Clerical/Sales categories and the low success rates for Professional and Technical occupations. In terms of the "status stretch" thesis discussed in Chapter 3, the results may also reflect labor market economics and the "downward stretch" of many respondents. Hence, since over half aspire to a Professional or Technical occupation but only 13% of the labor force are in such occupations, a relatively large proportion of these respondents will be forced to select an alternative occupation and therefore be defined as unsuccessful. Alternatively, only 12% anticipate a Clerical/Sales and only 12% anticipate a Craftsman/Operative occupation, although about 25% of the labor force are in each category. As a result, those selecting such occupations initially can be expected to be more successful in pursuing them since more young adults "drop into" these occupations than "drop out."

About a third of those intending to pursue several fields were successful: Education (34.8%), Humanities/Arts (34.3%), Health (33.2%), and Business (32.9%). Those intending to pursue a Preprofessional field of study were the least successful (17.9%), and the remaining fields had intermediate success rates: Computer/ Engineering /Architecture (26.4%), Social Science (23.2), Agriculture/Home Economics/ Vocational (22.9%), and Biology/Physical Science/Math (20.9%). The relatively low value for the Preprofessional field may reflect the phenomenon noted above: professional occupations attract many but are successfully pursued by few. The data suggest that those fields requiring professional preparation (e.g., education, business, health) have somewhat higher success rates than do fields more typically found in colleges of arts and science (e.g., Humanities/Arts, Social Science). The low rate for the Preprofessional category also fits in with this conclusion given the fact that many of these students study in colleges of arts and science at the undergraduate level.

In short, the data for both occupation and intended field of study indicate wide variability in success rates. The results do not support a clear choice between occupational choice theory and opportunity structure theory. Perhaps both theories are relevant. The "high success" occupations and fields may be those where rational occupational decision making prevails, while the "low success" occupations and fields may be those where more choices need to be made at more junctures, each with its own set of costs and opportunities. If correct, this conclusion would reflect the varying levels of rational decision making across the categories. An alternative explanation may lie simply in the status of the choice. Higher status categories attract more choices but have lower percentages in the labor force. Hence, more selectors will be defined as unsuccessful. In short, more people select high but move down than select low and move up. Undoubtedly some of the differences in successful pursuit are explained by background and other characteristics of those entering each field, which are the focus of the next subtopic.

Subtopic 2: Bivariate Analyses of Successful Pursuit

The results discussed above highlight the variability in success rates among the various occupations and fields. One factor that may explain the differential rates of success is the relationship between each of several independent variables and successful pursuit. Analyses of such relationships will clarify why some are successful while others are not. Therefore, Subtopic 2 involves bivariate analyses of predictors of success in each of the occupation and field of study categories. Background variables, school-related variables, and family formation and work experience variables will be addressed for each category. Only statistically significant differences (.01) will be analyzed. Since only five of the 124 respondents planning to be housewives failed to attain that goal, no analyses were done on predictors of success for this category.

Since the effects of family formation variables are often sex-linked (Treiman and Terrell, 1975; Waite and Moore, 1978), sex differences in these variables will be reported. For each of the three variables, the differences between successful women and men will be assessed for statistical significance only for the variables showing a statistically significant difference between those successful and unsuccessful. Given the relatively small subgroup sizes, .05 will be the level used.

Planned Occupation

Professional 2 Only five background variables showed statistically significant differences between those who successfully and unsuccessfully pursued a Professional 2 occupation. Those successful scored substantially higher on self-concept (.28 versus .14) and somewhat higher on SES (.54 versus .40). Those successful also have higher educational aspirations (5.67 versus 5.35), and their parents also hold higher educational aspirations for the respondents (5.48 versus 5.22 for father and 5.61 versus 5.25 for mother). The remaining background variables are non-statistically significant. Hence, the key background variables appear to be SES and the generally SES-related variables of self-concept and educational aspirations of self and parents.

Several of the school-related variables are also relevant. Membership in the academic curriculum is particularly associated with successful pursuit (89.2% versus 77.0%); those in the general and vocational curricula are somewhat less likely to attain their goal (9.7% versus 18.3% for general and 1.1% versus 4.7% for vocational). Those successful also have higher aptitude scores (60.51 versus 56.73), and have both higher high school and college grade point averages (3.54 versus 3.08 and 3.27 versus 2.92, respectively). Also, those successful have completed more mathematics, science, and foreign languages courses (5.44 versus 4.74, 5.25 versus 4.52, and 3.95 versus 3.22, respectively). The results show that successful pursuit of a Professional 2 occupation is clearly linked to academic ability and performance.

All of the family and work experience variables are linked to successful pursuit for students in this category. Those marrying early are substantially less likely to successfully attain their occupation (18.4% versus 32.4%), as are those who had a child early (1.4% versus 11.3%). Also, the mean number of years worked early is linked to lower success rates (1.49 versus 2.24). Undoubtedly these factors make it somewhat more difficult financially and otherwise to compete for entry into and to complete the training required for a Professional 2 occupation. Only the early work variable shows significant sex differences: 1.38 for successful men and 1.76 for successful women. Perhaps such experience generates more resources and connections for women, which may enhance success.

In summary, successful pursuit of a Professional 2 occupation is best predicted by SES and self-concept, educational aspirations, academic aptitude and performance, and by lower levels of family and work involvement.

Professional 1 Successful pursuit of a Professional 1 occupation is correlated with several variables. The percentage of whites successful is higher than those unsuccessful (90.5% versus 84.9%) and the percentage of blacks successful is lower than those unsuccessful (6.5% versus 11.7%). SES is again strongly linked to success (.30 versus .08), as are self-concept and locus of control (.09 versus -.02 and .19 versus .05, respectively). Those successful have higher educational aspirations (4.78 versus 4.45) and both their parents hold higher aspirations for them as well (4.75 versus 4.44 for father and 4.81 versus 4.45 for mother).

Those in the academic curriculum are more likely to be successful (70.3% versus 52.6%), while those in the general and vocational curricula are somewhat less likely to be successful (21.1% versus 32.8% and 8.5% versus 14.7%). Aptitude again predicts success (56.28 versus 52.26), as do high school and college grade point averages (3.16 versus 2.82 and 3.05 versus 2.90, respectively). Those successful have also completed more coursework in mathematics (4.60 versus 3.87), science (4.27 versus 3.65), and foreign languages (3.04 versus 2.77). They are also less likely to have completed remedial reading (1.6% versus 4.3%). Those successful report greater teacher influence (13.6% versus 9.6%) and lower levels of employment counseling (21.7% versus 27.3%).

All three family and work experience variables are again related to successful pursuit. Those who marry early and have children early are much less likely to be successful (27.7% versus 42.6% and 7.8% versus 21.9% respectively), and those successful have completed slightly fewer early years working (2.04 versus 2.52). Only the early marriage variable shows significant sex differences: 23.1% of successful men and 31.4% of successful women married early. Perhaps early marriage (presumably without children) provides women with more financial resources than it does for men.

Many of the factors predicting successful pursuit of a Professional 1 occupation parallel those for the Professional 2 category. Successful pursuit is again linked to SES, self-concept, and educational aspirations, to academic aptitude and performance, and to reduced family and early work involvement. In addition, successful pursuit is higher for whites and lower for blacks, more characteristic of those with an internal locus of control, and more characteristic of those noting considerable teacher influence. Together, the results show quite clearly the importance of academic aptitude and performance for successful pursuit for both professional occupations. In addition to aptitude itself, successful pursuit is linked with coursework in mathematics, science, and foreign languages. The first two in particular are importance substantive areas for these two fields. Also notable are the significant effects of early marriage, early childbearing, and early work experience on successful pursuit for both professional occupations. Apparently such family and work involvement encourages those with professional aspirations to either fail to begin or to withdraw from their studies before completion.

Technical Only three of the background variables are related to successful pursuit of a Technical occupation. The percentage Hispanic is lower for the successful group (1.5% versus 5.0%); those successful also display higher levels of internal locus of control (.19 versus .02) and note greater parental influence on future plans (54.8% versus 39.8%). Turning to school experiences, those successful have higher aptitude scores (54.25 versus 51.83) as well as higher high school and college grade point averages (3.05 versus 2.76 and 3.16 versus 2.93 respectively). In addition, those successful have completed more science (4.22 versus 3.74) and foreign languages courses (2.56 versus 1.86).

In short, few variables predict successful pursuit of a Technical occupation. The most important factors appear to be academic aptitude and performance, not being Hispanic, an internal locus of control, and parental influence. The role of the academic aptitude and performance variables, particularly the number of science courses completed, underscores the academic training required for technical occupations.

Teacher Several background variables predict successful pursuit of a teaching occupation. Females are more highly represented in the successful group (80.4% versus 69.8%). Hispanics and blacks are less likely to be successful (1.2% versus 4.2% and 4.7% versus 11.2% respectively), while whites are more likely to be successful (94.2% versus 84.1%). Those successful display higher levels of internal locus of control (.26 versus .14), and their mothers hold higher educational aspirations for them (4.98 versus 4.84).

Those in the academic curriculum have a higher success rate (76.2% versus 66.8%), while those in the general and vocational curricula have lower success rates (19.7% versus 25.7% and 4.1% versus 7.5% respectively). While the difference for aptitude is not statistically significant, both of the academic performance variables--high school and college grade point averages--are higher for the successful group (3.24 versus 3.02 and 3.16 versus 2.92 respectively). Also, those successful have completed more coursework in mathematics (4.62 versus 4.01), science (4.01 versus 3.55), and foreign languages (3.33 versus 2.88). They also are much less likely to have completed remedial reading (1.2% versus 5.0%).

All three of the family and work experience variables predict successful pursuit of a teaching occupation. Those marrying early are less likely to be successful (31.2% versus 39.5%), as are those who experience early childbearing (6.5% versus 20.2%).

Those successful have also completed fewer years working in the early period (1.75 versus 2.27). None of the three variables shows significant sex differences.

In summary, the data underscore the importance of sex and race, as well as locus of control and mother's aspirations, for successful pursuit of a Teacher occupation. The higher representation of females in the successful group may indicate a greater persistence among females in attaining this traditionally female-dominated occupation. Perhaps men are more likely to select other occupations as they realize the limited opportunities and income in the teaching profession. The results for race suggest that minorities experience greater difficulties in completing the training and in entering the field. The importance of an internal locus of control is again demonstrated, as is the role of mother's educational aspirations. Once again, academic curriculum membership predicts success, undoubtedly due to the more substantial academic training obtained and probable greater ease in completing a college education. Grades both in high school and in college are again important, suggesting that those who successfully pursue a Teacher occupation pursue their studies more diligently. The role of mathematics and science courses underscores the importance of the knowledge and skill these courses produce. As with many other professional occupations, early marriage and childbearing, as well as early work experience, dampen chances for successful pursuit, due to the restrictions such statuses impose on completing one's education.

Manager/Proprietor Those successful have higher SES scores (.32 versus .09) and have a higher level of internal locus of control (.17 versus -.04). Both parents also hold higher educational aspirations for the respondent (4.45 versus 4.16 for father and 4.59 versus 4.18 for mother). Only one school-related variable is statistically significant: those successful report lower levels of teacher influence (5.0% versus 11.9%).

In summary, few variables predict successful pursuit of a Manager/Proprietor occupation. The most important seem to be SES and locus of control, underscoring the linkage between SES and success as well as between an internal locus of control and success. These results, as well as those for parental aspirations, suggest that successful pursuit of a Manager/Proprietor type of occupation is largely dependent on socialization factors. Apparently those who successfully pursue such an occupation are less sensitive to teacher influence since they report lower levels of such influence.

Craftsman/Operative Several background variables are relevant. Of those successful, 6.9% are female versus 46.8% for those unsuccessful; indicating that males are much more successful than are females. Parental aspirations are again important, although for both father's and mother's aspirations those successful report lower levels (3.29 versus 3.54 for father and 3.37 versus 3.63 for mother). The only two significant school-related variables are number of foreign languages courses and college GPA. Those successful have completed fewer such courses (.68 versus 1.07) and have a slightly higher college GPA (2.95 versus 2.87). Finally, work experience in the early years is more characteristic of those successful (3.46 versus 2.77). However, successful men have 3.49 years experience while successful women have 2.92; experience seems more salient for men.

In summary, the key factor seems to be sex, with males vastly overrepresented in the successful category. Perhaps females continue to experience discrimination in their preparation for entry into this occupation, and may drop out as a result. The data for parental aspirations suggests that high parental aspirations predicts unsuccessful pursuit; perhaps such parents also encourage their children to pursue other occupations requiring more education. The fewer number of foreign languages courses completed may reflect the lack of importance of such courses for this occupation. The higher college GPA again suggests that high academic performance predicts success, while the greater work experience suggests that such experience is particularly salient for those pursuing a Craftsman/Operative occupation.

Clerical/Sales Several background variables are relevant for successful pursuit of a Clerical/Sales occupation. Fully 94.5% of those successful are female versus 78.9% of those unsuccessful; females pursuing this female-dominated occupation are more likely to be successful. While 8.6% of those successful are black, 14.5% of those unsuccessful are black, indicating greater difficulties for blacks. Those successful again display a greater internal locus of control (.02 versus -.25), as well as higher SES (-.21 versus -.36). Both aptitude and high school GPA also predict success (48.43 versus 46.46 and 2.87 versus 2.63 respectively), again documenting the importance of academic aptitude and performance. While early marriage is not statistically significantly related to success, only 32.8% of those experiencing early childbearing were successful versus 52.7% of those unsuccessful. The depressing effect of early childbearing on occupational success is again illustrated. Finally, early work experience also predicts successful pursuit (3.12 versus 2.01). There are no significant sex differences for early childbearing and early work experience.

In summary, sex is a key predictor of successful pursuit in this female-dominated occupational category, perhaps reflecting the support females receive in pursuing such an occupation. The underrepresentation of blacks among those successful again underscores the difficulties minorities experience in successfully attaining their chosen occupation. SES and locus of control are also highlighted by the results, further underscoring the importance of socialization factors. The academic aptitude and performance variables again reflect the importance of both of these concepts. These data also reaffirm the depressing effect on success that early childbearing has for women. Finally, work experience enhances success through job contacts and cumulative skill building.

Service Only four variables statistically significantly distinguish those successful from unsuccessful in the Service category. Sex is relevant, with 74.9% of those successful being female versus 66.4% of those unsuccessful. Once again, the higher representation of women in the success category may reflect the predominantly female composition of this occupation. Only 2.7% of those successful are Hispanic versus 7.1% of those unsuccessful, further documenting the difficulties that minorities experience as well as the discrimination they undoubtedly continue to confront. The other two significant variables are remedial reading and remedial mathematics; those successful are less likely to have been in such programs (6.6% versus 12.6% for reading and 4.3% versus 9.7% for mathematics).

In short, few variables predict successful pursuit of a service occupation. The most important is sex, with females more highly represented in the successful category. Like the Clerical/Sales category, the Service category is predominantly female, and hence the results suggest that females that pursue a traditionally female occupation have a greater chance of success. Hispanics experience greater difficulties in successfully pursuing this occupational choice. The data for remedial mathematics and reading indicate that participation in such programs is somewhat linked to unsuccessful pursuit; perhaps participation in such programs reduces one's chances for successful completion of other coursework in these areas, and may also generate a labeling effect that continues upon entry into the labor force.

Farmer/Laborer Only two variables statistically significantly distinguish those successful from unsuccessful in this category. First, those successful have a higher high school grade point average (2.51 versus 2.20). Second, those successful are much more likely to report the provision of educational counseling (55.0% versus 36.1%). The fact that high school GPA predicts success for this category underscores its general importance since a high grade point average is generally not required for entry into these occupations. The unusual results for educational counseling suggest that such services result in greater success. Perhaps high school counselors encourage those with interests in farming and laborer positions to curtail their education, which apparently is related to success.

Military Only two of the variables statistically significantly distinguish those successful from those unsuccessful. First, 9.7% of those successful are female versus 36.1% of those unsuccessful. Second, those successful have completed 4.39 mathematics courses versus 3.28 for those unsuccessful. The results for sex again document the difficulty females experience in entering a predominantly male occupation. As these females fulfill their plans, they may experience discrimination and otherwise find it difficult to successfully enter this occupation. The data for mathematics courses completed may reflect the importance of mathematical training for a variety of occupations in the military. In general, however, successful pursuit of a Military occupation is dependent on factors other than those examined here.

Summary Several conclusions emerge in these bivariate analyses of factors of successful pursuit of occupation. First, those occupations with the greatest number of discriminating variables are occupations generally requiring postsecondary education. Hence, the number of statistically significant differences in the Professional 1, Professional 2, and Teacher occupations are 24, 18, and 18 respectively. The remainder of the occupations have fewer than ten statistically significant discriminating variables. Although most of the variables analyzed are school-related, these three occupational categories also have a greater number of statistically significant differences in the background variables and in the family and work experiences variables. The results indicate that background variables, school experiences, and family and work experiences are particularly important for successful pursuit in these three categories. Similarly, the data suggest that variables other than those examined are more important in the rest of the occupational categories, particularly Service, Farmer/Laborer, and Military.

A second conclusion pertains to several general results. In six occupations, a higher high school grade point average predicts successful pursuit; in five categories, a higher college grade point average predicts successful pursuit, and in four categories, a higher aptitude score predicts successful pursuit. Together these results suggest that academic aptitude and performance may be general predictors of success. Sex is statistically important in five categories, with the results showing that a match between the sex of the respondent and the sex dominance of the category contributes to successful pursuit. The results show that females will continue to experience lower levels of success in traditionally male occupations. High internality predicts success in five categories, suggesting that successful pursuit is linked to a belief that one has control over one's life. SES is statistically significant in only four of the categories, with high SES predicting success in all four categories.

Although educational aspirations is significant in only two categories, father's educational aspirations appeared significant in four categories and mother's educational aspirations appeared significant in five categories. These results show that parental expectations and aspirations are salient for many respondents, particularly those pursuing occupations requiring advanced training. The number of mathematics and science courses completed appeared significant in four categories each, documenting the importance of mathematical and scientific training for success, especially in occupations emphasizing such knowledge. Perhaps such training teaches logical and analytical and other skills necessary for successful pursuit. Finally, early childbearing depresses success in four categories, three of which require advanced training and one of which is female-dominated (Clerical/Sales). These results suggest that early childbearing is dysfunctional for those pursuing advanced training and also that the effects of early childbearing will be most pronounced in predominantly female occupations.

A final conclusion pertains to the differential importance of the variables across the occupational categories. In spite the few similarities noted above, there are differences across all the categories regarding the predictors of successful pursuit. This conclusion, in combination with the few predictors in several occupations, indicates that successful pursuit is due at least in part to factors not included in the analyses.

Intended Field of Study

Preprofessional Only two of the background variables are linked with successful pursuit of a Preprofessional field of study. Those successful have higher educational aspirations (5.79 versus 5.49), and mother's educational aspirations for the respondent are also higher (5.76 versus 5.41). Regarding school experiences, those successful have higher aptitude scores (61.23 versus 58.32), as well as higher high school and college grade point averages (3.60 versus 3.16 and 3.35 versus 2.95 respectively). They also have completed more coursework in mathematics (5.72 versus 4.88), science (5.31 versus 4.68), and foreign languages (4.34 versus 3.51). Finally, all three family and work experience variables are linked to a successful pursuit. Those successful are much less likely to have married early (18.1% versus 30.7%) and to have had children early (.8% versus 8.5%). They are also less likely to have had early work experience (1.30 versus 2.12). Regarding sex differences, 13.9% of successful men married early compared to 26.7% of successful women, and successful men have 1.13 years early work experience compared to 1.64 for successful women. Early marriage (presumably without children) may provide more resources to women than to men, and early work experience may provide more useful socialization experiences for women than for men.

In summary, successful pursuit of a Preprofessional field of study is linked primarily to academic aptitude, performance, and preparation, as well as to reduced family and work commitments. Academic aptitude and performance are undoubtedly required for successful entry into and completion of a Preprofessional field of study, and the coursework variables suggest that mathematics, science, and foreign languages are important for success in this field. The long and difficult course of study frequently associated with Preprofessional fields requires reduced family and work commitments.

Humanities/Arts Several background variables predict successful pursuit in this field of study. Hispanics and blacks are less likely to be found in the successful category (1.0% versus 5.4% and 3.3% versus 6.8% respectively), and whites are more likely to be found in the successful category (95.7% versus 87.8%). Those successful also have higher SES scores (.51 versus .23) and hold higher educational aspirations (5.08 versus 4.87). Educational aspirations of father and mother are also higher (5.00 versus 4.79 and 5.00 versus 4.84 respectively).

Several school-related variables are also related to successful pursuit in this category. Academic curriculum location is linked with successful pursuit (76.4% versus 61.7%), while general curriculum and vocational curriculum location are linked with lower success rates (21.4% versus 30.6% and 2.2% versus 7.7% respectively). Successful pursuit is also linked with aptitude (58.19 versus 54.48), as well as with high school and college grade point averages (3.31 versus 3.01 and 3.22 versus 2.99 respectively). Interestingly, those successful have completed more mathematics courses (4.23 versus 3.82), and, not unexpectedly, have completed more foreign languages courses (3.75 versus 2.92). Finally, several of the family and work experiences variables predict success. Once again, those who married early are less likely to be successful (26.6% versus 36.5%), as are those who have had children early (2.6% versus 16.3%). Those successful have also completed less early work experience (1.93 versus 2.50), although successful men have completed 2.19 years while successful women have completed only 1.79.

In summary, successful pursuit of a Humanities/Arts field of study seems to be particularly linked to race, SES, educational aspirations, academic aptitude, performance, and training, and to family and work experiences. Minorities are less likely to be successful, as are those from lower SES backgrounds. Perhaps there is greater support for the humanities and arts in the middle and upper social classes. As expected, those in the academic curriculum are more likely to be successful, testimony to the importance of an academic preparation. Students also must have high aptitude scores as well as reasonably high grade point averages to be successful, testimony to the demands of the training in this field. While the expected relationship between foreign languages courses completed and successful pursuit was found, the generally assumed relationship between English preparation and successful pursuit was not substantiated. Even though the humanities and arts do not require extensive mathematical preparation, such preparation predicts successful pursuit. The deterring effect of early family commitments as well as early work experiences are again demonstrated.

Education Several background variables are linked with successful pursuit in this field of study. Females are much more likely to be successful (83.3% versus 67.3%). While Hispanics and blacks are less likely to be successful (.2% versus 3.7% and 3.6% versus 6.3% respectively), whites are more likely to be successful (96.2% versus 90.0%). Educational aspirations again is linked with successful pursuit (5.02 versus 4.87), as are the educational aspirations of parents (4.98 versus 4.82 for father and 5.01 versus 4.84 for mother).

The importance of academic curriculum location is again seen (81.5% versus 63.2%), as are the depressing effects of location in the general and vocational curricula (17.0% versus 29.0% and 1.6% versus 7.8% respectively). Education is the only field where the aptitude scores of those successful did not differ statistically significantly from those unsuccessful. It is one of two fields where a college GPA is not statistically significantly linked with successful pursuit, although those successful do have higher slightly high school grade point averages (3.16 versus 2.96). These results underscore the minimal role of aptitude and academic performance in the successful pursuit of an education field of study. However, several coursework variables are related to successful pursuit, including mathematics (4.62 versus 3.98), science (4.11 versus 3.63), and foreign languages (3.36 versus 2.88). Perhaps the skills acquired in such courses enable aspirants to more successfully complete the coursework in colleges of education. The lower participation of successful aspirants in remedial reading (1.3% versus 4.8%) is the only statistically significant difference for this variable, and the lower participation in remedial mathematics (0% versus .5%) is one of two fields in which this variable is statistically significant.

Several of the family and work experience variables are also relevant. Those who marry early are less likely to be successful (28.9% versus 38.6%), as are those who have children early (5.5% versus 16.1%). Those successful are also less likely to have completed early work experience (1.71 versus 2.29).

Only one field has more statistically significant variables than does Education. The 19 statistically significant differences reflect the importance of background, school-related, and family and work variables. The lack of a relationship between successful pursuit and both academic aptitude and performance, as well as a linkage between remedial coursework and lack of success, suggest that academic ability and performance produce no positive effects and remedial academic preparation produces negative effects. The fact that education differs in these variables from almost all other fields underscores the minimal importance of academic preparation and ability for successfully pursuing Education.

The data for sex again show that women pursuing a predominantly female occupation are more likely to be successful, and the results for race reflect the difficulties minorities experience in successfully attaining an education degree. The data for educational aspirations parallel that for most other fields, and reflect the importance of these variables. Although academic ability and performance are unrelated to successful pursuit, those in the academic curriculum are much more likely to be successful, highlighting the importance of the values and skills attained in this course of study. Those successful also appear to pick up a variety of skills in the mathematics, science, and foreign languages courses. The results again reaffirm the depressing effect of early marriage and childbearing, as well as early work experience; involvement in these activities apparently reduces the time and energy devoted to completing a field of study.

Business Several background variables are linked with successful pursuit of a Business field of study. Females are underrepresented in the successful category (23.6% versus 43.2%), as are Hispanics and blacks (2.3% versus 4.8% and 4.9% versus 9.9% respectively); the corresponding values for whites are 92.8% and 85.3%. Those successful are more likely to come from higher SES backgrounds (.37 versus .13), and are more likely to exhibit an internal locus of control (.18 versus .08). All three educational aspirations variables are also linked with successful pursuit (4.93 versus 4.56 for aspirations of respondent, 4.83 versus 4.56 for aspirations of father, and 4.88 versus 4.63 for aspirations of mother).

Those from an academic curriculum are more likely to be successful (65.1% versus 41.4%), and those from the general and vocational curricula are less likely to be successful (22.5% versus 28.8% and 12.4% versus 29.8% respectively). Aptitude again predicts success (56.01 versus 52.57), as does both high school and college grade point averages (3.07 versus 2.86 and 2.92 versus 2.76 respectively). Several coursework variables are also relevant: mathematics (4.85 versus 3.84), science (4.08 versus 3.27), social studies (5.43 versus 5.01), and foreign languages (2.89 versus 2.11). Those noting the provision of employment counseling are less likely to be successful (22.6% versus 33.1%). Finally, early marriage and early childbearing again are linked with lower success rates (24.6% versus 39.4% and 4.1% versus 17.0% respectively), as is early work experience (2.18 versus 2.67). However, substantial sex differences emerge. Only 15.9% of successful men married early while 52.9% of successful women did so. Also, only 2.9 of successful men had children early compared to 8.1% of successful women.

More variables are statistically significant for Business than for any other field of study, reflecting the importance of background variables, school experiences, and family and work experiences. That females and minorities experience lower success rates may reflect the difficulties of entering a predominantly white male field. Such students may experience discrimination and other discouraging experiences which inhibit their success potential. The effect of SES is only one of two statistically significant effects among the fields, suggesting that differential socialization may be at work. The importance of educational aspirations, as well as those held by parents, is again shown. The data also show clearly the role of academic aptitude and performance, as well as training in an academic curriculum and completing various academic courses. These data indicate that success in attaining a business degree depends on solid academic ability and preparation. The difference for the employment counseling variable is the only statistically significant difference among the fields and the effect is negative; perhaps schools with a great deal of employment counseling are less likely to encourage students to complete the educational training required for a business degree. Finally, the negative effect of early marriage and childbearing, as well as early work experiences, are again seen.

Social Science Only two of the background variables are related to successful pursuit of a Social Science field of study. Those successful have higher educational aspirations (5.21 versus 4.98), as well as higher educational aspirations held by mother (5.09 versus 4.87). Regarding school experiences, academic aptitude is linked with successful pursuit (57.25 versus 55.38), as are both high school and college grade point averages (3.14 versus 2.98 and 3.14 versus 2.94 respectively). Those successful have also completed more foreign languages courses (3.76 versus 3.13). Regarding family and work experiences, those successful are less likely to marry early (23.8% versus 34.4%) and have children early (5.0% versus 15.4%). They also are less likely to have early work experience (1.69 versus 2.33).

In summary, successful pursuit of a Social Science field of study is linked primarily to academic aptitude and performance, to educational aspirations, and to reduced early family and work experiences.

Biology/Physical Science/Mathematics This is the only field of study lacking any linkages between background variables and successful pursuit. However, academic aptitude and performance are both substantively linked to successful pursuit (61.37 versus 57.20 for aptitude, 3.57 versus 3.18 for high school grade point average, and 3.22 versus 2.92 for college grade point average). As expected, the number of mathematics courses completed is linked with successful pursuit (5.83 versus 5.14), although the expected role of science courses was not statistically significant. However, those successful in this field have completed more foreign languages courses (3.82 versus 2.97) and are less likely to have completed remedial mathematics (0% versus 1.8%). Also, those successful are considerably more likely to have noted a great deal of teacher influence (23.2% versus 9.7%). Finally, both early marriage and early childbearing depress chances for successful pursuit (19.4% versus 33.3% and 2.0% versus 10.5% respectively), as does early work experience (1.54 versus 2.22). None of the successful men had children early while 5.2% of the successful women did so.

The results for the Biology/Physical Science/Mathematics field both resemble and differ from the results for other fields. Like most other fields, academic aptitude and performance play a significant role, as does mathematics training and early family and work commitments. However, unlike many other fields, the background variables are unimportant. While science training is statistically significantly related to successful pursuit in five of the fields, this field is not among them. This finding is somewhat surprising, given the scientific background required for entry into these fields of study. Apparently other academic background variables are more salient. Perhaps the most unique finding for this field is the fact that teacher influence is statistically significant only in this field, and the difference between those successful and unsuccessful is substantial. Teacher influence seems critical for successful pursuit of this field, perhaps due to the difficulties in entering and completing this course of study. In short, the data seems to suggest that while parents and counselors are not important as significant others, teachers play a major role in supporting these students' decisions.

Computer/Engineering/Architecture Four of the background variables are related to successful pursuit of this field. Those successful display greater internal locus of control (.24 versus .11), they have higher educational aspirations (5.02 versus 4.80), and they have higher parental educational aspirations (4.96 versus 4.72 for father and 4.97 versus 4.80 for mother). As expected, those located in the academic curriculum are more likely to be found in the successful group (81.8% versus 68.2%), while those in the general and vocational curricula are more likely to be found in the unsuccessful group (10.9% versus 24.1% and 7.3% versus 7.7% respectively). Successful pursuit is again linked with aptitude (58.32 versus 54.95) and academic performance as reflected in high school and college grade point averages (3.27 versus 2.91 and 3.07 versus 2.16 respectively). Coursework in mathematics and science are both substantively linked with successful pursuit (5.82 versus 5.05 and 4.93 versus 4.32 respectively). Only one of the family and work experience variables is relevant: those successful have less early work experience (1.54 versus 2.51).

In summary, successful pursuit of this field is linked primarily to academic aptitude, performance, and preparation, locus of control, educational aspirations, and to lower levels of early work experience. The salience of the academic variables undoubtedly reflect the academic demands of this field of study.

Agriculture/Home Economics/Vocational Only three of the background variables are relevant for successful pursuit of this field. Those successful display greater internality (.15 versus -.03) and higher educational aspirations (4.67 versus 4.35). Also, the positive effect of parental influence (56.2% versus 40.2%) is the only statistically significant difference for this variable. Regarding school experiences, academic aptitude and performance, as measured by high school grade point average, are linked with successful pursuit (55.38 versus 52.56 and 3.07 versus 2.80 respectively). Mathematics coursework is also positively related to successful pursuit (4.45 versus 3.72). Finally, all three early family and work experience variables are associated with lower success rates: early marriage (31.8% versus 45.0%), early childbearing (7.1% versus 18.3%), and early work experience (2.13 versus 2.84).

The importance of academic aptitude and performance, as well as mathematical background, is again seen. Early family commitments and work experience also depress success rates. The importance of an internal locus of control and high educational aspirations is also again seen. One notable difference for this field is the substantial effect of parental influence, suggesting that such influence and support is particularly critical for pursuing a more vocational field of study. Perhaps students aspiring to a vocational field of study rely more on their parents' advice and support.

Health Several background variables are relevant for successful pursuit of this field. Females are much more likely to be in the successful group (96.6% versus 75.4%), as are whites (96.7% versus 87.2%); the corresponding figures for Hispanics are .9% versus 4.0% and for blacks, 2.4% versus 8.8%. Internality is again linked with successful pursuit (.29 versus .14), as is academic curriculum location (79.3% versus 63.1%); general and vocational curricula location predict lower rates of success (16.7% versus 28.6% and 4.0% versus 8.3% respectively). Once again, success is linked with aptitude (56.57 versus 52.97) and with high school and college grade point averages (3.33 versus 2.94 and 3.07 versus 2.85 respectively). Given the academic demands of many Health fields, it is not surprising that both mathematics and science coursework are linked with success (4.53 versus 4.12 and 4.85 versus 4.18 respectively). Foreign languages coursework also is linked with success (3.65 versus 2.64). Finally, both early marriage and childbearing are linked with lower success rates (34.8% versus 47.0% and 6.1% versus 20.2% respectively), as is early work experience (1.87 versus 2.28). However, none of successful men had married early while 36.0% of the successful women had married early.

In summary, females are more likely to be successful in this field while minorities are less likely to be successful. Once again, it seems that female entering a traditionally female field of study have a greater chance for success. The importance of an internal locus of control for success is again demonstrated. Like many other fields, academic aptitude, performance, and preparation are relevant for successful pursuit. Also, like many other fields, early family and work commitments depresses success potential.

Summary Several conclusions emerge from this analysis of bivariate predictors of successful pursuit of field of study. First, a considerable amount of variablility exists in the number of statistically significant predictors per field, ranging from nine for Social Science and Agriculture/Home Economics/Vocational to 19 for Education and 23 for Business. Clearly these variables are differentially important across the various fields. Those fields with a greater number of statistically significant variables are generally fields requiring a separate professional degree (e.g., Education, Business, Health). Those with fewer statistically significant differences are more often traditionally liberal arts fields (e.g., Social Science, Biology/Physical Science/Mathematics).

Second, several variables display consistent effects across many fields. For example, high school grade point average is positively linked to success in all nine fields, aptitude is positively linked for eight fields, and college grade point average is positively linked for seven fields. Together, these results document the pervasive influence of academic ability and performance on successful pursuit of field of study. Also, early family commitments depress success rates in eight of the nine fields and early work experience depresses success rates in all nine fields. Such early commitments clearly make it more difficult for students to successfully pursue their intended fields of study, undoubtedly by introducing competing factors for attention. Mathematics coursework also has a positive effect in eight of the nine fields, highlighting the connection between the knowledge and skills gained in such coursework and successful pursuit. Foreign languages coursework is positively linked for seven of the nine fields, further testimony to the importance of a diversity of academic preparation. Finally, educational aspirations shows a positive linkage in seven fields, while mother's educational aspirations shows positive linkages in six fields. Since all the fields require postsecondary education, these data suggest that those aspiring to higher educational levels are more likely to attain such levels.

Several variables are insignificant in most or all fields, including English and social studies coursework. Perhaps English coursework is routinely expected of everyone, and therefore does not predict success. Perhaps social studies coursework does not contribute the type of knowledge and skills required for successful attainment. Remedial reading and remedial mathematics coursework are also unimportant. Interestingly, significant others play a minor role in successful pursuit of field of study, including parents, teachers, and counselors. Also, the provision of employment and educational counseling seem irrelevant. In about half of the fields, minorities are less likely to be successful, and the importance of an internal locus of control is also seen in four of the fields. Interestingly, SES and self-concept appear to be irrelevant. Only three of the fields display statistically significant sex differences, and all three fields are traditionally female- or male-dominated. These results suggest that females aspiring to a female-dominated occupation have a greater chance for success, while females planning on pursuing a male-dominated field of study have a substantially lower chance of success. Undoubtedly a variety of discriminatory experiences, as well as anticipatory socialization, contribute to these findings. On balance, the data show the general importance of several factors and the more specific importance of several other factors.

Several differences and similarities appear in comparing the overall results for occupation with those for field of study. Generally, the school-related variables and the family and work experience variables seem more relevant for field of study than they do for occupation. The school-related variables undoubtedly provide knowledge, skills, and values relevant for successful pursuit of field of study, although such contributions are less salient for successful pursuit of occupation. That is, school-related variables are more relevant for pursuing further education than for pursuing an occupation. The greater salience of early family and work commitments for field of study may simply reflect the fact that such commitments are frequently incompatible with the sustained time and attention required for successful pursuit of field of study. That is, it easier to successfully pursue a Service occupation with early family and work commitments than it is to successfully pursue a Business degree.

Regarding orientations, both sets of analyses demonstrate the lack of importance of self-concept and the importance of an internal locus of control. Apparently belief in the value of oneself is not as important as a belief that one has control over one's life. SES does not have the all-pervasive influence frequently assumed, with only four statistically significant differences in the occupations and two in the fields of study. Perhaps the effects of SES are carried through such variables as locus of control and educational aspirations. But educational aspirations are much more relevant for field of study than they are for occupation, which simply reflects the fact that people must aspire to a field of study before they can successfully pursue it. Finally, both sets of analyses show mathematics and science training to be linked with successful pursuit, although the effects are greater in the field of study analyses. It seems that such preparation provides knowledge and skills that are applicable across various fields and occupations and which enhance students' abilities to successfully execute their plans.

These analyses help clarify the independent linkages between the independent variables and successful pursuit. However, the combined effects of these variables also need to be addressed--the focus of the next subtopic.

Subtopic 3: Multivariate Analyses of Predictors

Multivariate analyses of the predictor variables help assess the unique effect of each variable and also help adjust for the linkages frequently found among independent variables. Such analyses provide a more compact approach for examining the factors associated with successful pursuit. Hence, Subtopic 3 involves discriminant function analyses for each of the occupation and field categories. The standardized discriminant function coefficients are reported in Table 4.4 for occupation and Table 4.5 for field of study. Several other statistics are also reported. The canonical correlation reflects the relationship between the function and the propensity to be successful versus unsuccessful. It reflects the function's ability to discriminate among the two groups (successful/not successful). Eta-squared reflects the proportion of variance in the discriminant function explained by the independent variables. The significance level of Wilks' lambda reflects the likelihood that the differences in the function are due to chance. The "% classified correctly" value reflects the percentage of cases classified correctly using the discriminant function coefficients. Finally, tau is a proportional reduction in error statistic which tests for the improvement in classification over random assignment based on prior probabilities. The focus will be on the standardized coefficients, and only coefficients greater than .100 will be analyzed; this cufoff is a conservative benchmark for identifying coefficients that are substantively significant. The results for the Housewife category will not be reported or analyzed since only thirty-seven cases had non-missing values on all the variables.

Planned Occupation

Professional 2 Eleven of the standardized coefficients have values greater than .100. The canonical correlation is .419, with an eta-squared of .176. The function is highly statistically significant, and correctly classifies 77.9% of the cases. A tau of .406 reflects a 41% reduction in error by using the coefficients over random assignment based on prior probabilities.

The two largest standardized coefficients are for high school and college grade point averages (.463 and .437 respectively). The third largest coefficient is for early work (-.367), and the fourth is for sex (-.228). Next is locus of control (-.217), indicating that a more external locus of control reduces the chances of successful pursuit. Hispanic has a positive coefficient (.136), as does aptitude (.131). Science coursework is also positive (.133), but the provision of educational counseling is negative (-.118). Finally, both early marriage and childbearing have negative effects (-.178 and -.141).

In summary, successful pursuit of a Professional 2 occupation is best predicted by grade point average and early work experience. Given the competitiveness and demands of the educational training for a Professional 2 occupation, it is not surprising that grade point averages in both high school and college are significant. Academic aptitude also enhances successful pursuit. The negative substantial contribution of early work experience suggests that those who took time out to work were less likely to attain their occupational goal. Early family formation also reduces chances for successful pursuit, undoubtedly due to the additional time and financial constraints that such events impose. Since occupations in this category, such as doctor, require extensive scientific training, it is not surprising that science coursework predicts successful attainment. The importance of an internal locus of control reflects the reliance on self-motivation required for the training expected of many Professional 2 occupations. That males are more successful may reflect the male dominance of most Professional 2 occupations; the results suggest that females pursuing male-dominated occupations will be less successful. Finally, Hispanics are somewhat more likely to be successful, perhaps due to the extra motivation such minorities frequently exhibit when pursuing a particularly high status occupation.

Professional 1 Nine of the standardized coefficients are greater than .100. The canonical correlation is .306, with an eta-squared of .094. The function is highly statistically significant, and allows accurate classification of 68.1% of the cases. A tau of .288 reflects a modest improvement over random assignment based on prior probabilities.

High school grade point average is the most salient discriminating variable (.365), followed by early work experience (-.341), early childbearing (-.313), and early marriage (-.247). Science coursework is again relevant (.203), as is mathematics coursework (.105). The importance of aptitude and college grade point average are again demonstrated (.186 and .161 respectively). Finally, the results for sex (.183) suggest that females are somewhat more likely to be successful.

In summary, those most likely to successfully attain a Professional 1 occupation are those without early work and family responsibilities. Again, such commitments detract from the time and energy necessary for successful pursuit of these occupations. The results also underscore the importance of academic aptitude and performance, as well as science coursework. Many of the occupations in this category require advanced training, and therefore those better equipped for such training are more likely to be successful. Finally, the results indicate that females are somewhat more likely to be successful, perhaps due to the fact that this category includes such occupations as registered nurse and social worker.

Technical All but three of the 14 standardized coefficients are greater than .100. The canonical correlation is .332, and the eta-squared is .110. The function is highly statistically significant, and allows correct classification of 69.1% of the cases. A tau of .281 indicates a modest reduction in error over random assignment.

Both high school and college grade point averages are the most substantively significant (.416 and .392), followed by parental influence and the provision of educational counseling (.291 and .256 respectively). Number of mathematics courses is negative (-.241), while the number of science courses is positive (.174). Hispanics are somewhat less likely to be successful (-.205), while those with higher aptitude are somewhat more likely to be successful (.159). While early marriage is positively linked with successful pursuit (.175), early childbearing is negatively related (-.194). Finally, early work experience is also negative (-.193).

In summary, academic performance is the most important discriminating variable for those who successfully pursue Technical occupations. The data also show that academic aptitude and the provision of educational counseling are also positive. Together with the positive effect of science courses completed, these data show that academic aptitude, performance, and preparation are important elements in successful pursuit for these students. Perhaps involvement with mathematics courses encourages students to shift their occupational goals from a Technical occupation to an occupation requiring more mathematical training. The positive coefficient for science courses undoubtedly reflects some of the scientific demands of these occupations. More so than most other occupations, parental influence has a positive effect, reflecting the importance of parents for these students. Early marriage seems to enhance success for members of this group, while early childbearing has a negative effect; these data indicate that marriage itself is not a negative factor although early childbearing does reduce chances for successful pursuit. Both early childbearing and early work experience may preclude participation in training required for most of the occupations. Finally, Hispanics are less likely to be successful, reflecting a shift in interest.

Teacher All but three of the 14 standardized coefficients are greater than .100. The canonical correlation for this function is .359, with an eta-squared of .129. This function is highly statistically significant, and allows correct classification of 71.5% of the cases. A tau of .349 indicates an approximate 35% reduction in error by using the coefficients over random assignment based on prior probabilities.

Four factors seem particularly salient for successful pursuit of a teaching occupation. The most salient is aptitude (-.480), followed by college GPA (.475), early work experience (-.463) and number of mathematics courses (.421). Next come early childbearing (-.358), and sex (.261). Hispanics are again less likely to be successful (-.106), and those with a more internal locus of control are more successful (.159). High school grade point average is positive (.194), and participation in remedial mathematics is negative (-.193). Finally, science coursework is positive (.132).

In summary, grade point averages in both college and high school are linked with successful pursuit, as are mathematics and science coursework. These data reflect the importance of academic performance and preparation for successful pursuit of a teaching career. However, the aptitude coefficient is strongly negative, suggesting that more academically capable students depart from their selected occupation while the less academically capable students successfully attain their goals. Females are more successful, reflecting the advantages of selecting a female-dominated occupation. Those with a more internal locus of control are also more likely to be successful, underscoring the importance of control over one's life. Hispanics are less likely to be successful, again reflecting movement from teaching to other occupations as awareness of such opportunities develops. Finally, both early childbearing and early work experience detract from success; both of these activities undoubtedly make it more difficult, especially for women, to successfully complete the required education and entry into the field.

Manager/Proprietor Eight of the standardized coefficients are greater than .100. The canonical correlation is .303, with an eta-squared of .092. The function is highly statistically significant, and allows accurate classification of 65.9% of the cases. A tau of .283 reflects an approximate 28% reduction in error by using the function over random assignment.

The key discriminating variable is locus of control (.748), showing that those successful have a much greater internal locus of control. Next in importance is sex (-.470); males are much more likely to be successful. Those with early work experience and who married early are more likely to be successful (.362 and .226 respectively), although those having children early are less successful (-.129). While high school grade point average and aptitude are unrelated to success, the number of mathematics courses completed predicts success (.257). However, the number of science courses is a negative predictor (-.136). Finally, the provision of educational counseling is positive (.136).

In summary, the most important discriminating variable is locus of control; those with an internal locus of control are much more likely to be successful. A belief that one has control over one's life is critical for such occupations as these since they require sustained individual commitment to yield success. Most of those successful are male, perhaps reflecting the male-dominance of this occupation. Again a correspondence between sex of the student and sex dominance of the occupation enhances successful pursuit. The importance of mathematics courses may reflect the mathematical skills frequently encountered in these occupations. The positive coefficient for educational counseling suggests that the provision of such counseling more clearly enables these students to plan for their occupation. Early childbearing slightly depresses success, while early marriage and early work experience enhances success. Such experience generates the skills and personal contacts required for successful pursuit of a Manager/Proprietor occupation.

Craftsman/Operative Six of the 14 standardized coefficients exceed .100. The canonical correlation is .442, with an eta-squared of .195. The function is highly statistically significant, and allows accurate classification of 87.2% of the cases. A tau of .428 reflects an approximate 43% reduction in error by using the function over random assignment.

The key discriminating variable is sex (-.859); males are much more likely to be successful in this category. The second most important variable is early work experience (.344), underscoring the importance of such early experience. While academic performance and aptitude are unrelated to success, participation in remedial mathematics and the provision of educational counseling are negative predictors (-.226 and -.138 respectively). Parental influence is positive (.158), as is early childbearing (.102).

In summary, males are much more likely to successfully attain a Craftsman/Operative occupation, again reflecting a consonance between sex of student and sex dominance of the occupation. The positive coefficient for early work experience underscores the importance of early practical experience for obtaining a Craftsman/Operative occupation. The negative value for remedial math (along with the substantively insignificant value for mathematics courses) suggests that a certain minimum mathematical training is required for successful pursuit, although training beyond this minimum is unrelated. Apparently the provision of counseling encourages students to select other occupations, since its value is negative. Parental influence is positive, highlighting the importance of such influence for these students.

Clerical/Sales Five of the 14 standardized coefficients exceed .100. The canonical correlation is .427, with an eta-squared of .182. The function is highly statistically significant, and allows accurate classification of 85.7% of the cases. A tau of .467 reflects an almost 50% reduction in error by using the function over random assignment.

The two most important discriminating variables are early work experience (.734) and sex (.569). Of lesser importance is locus of control (.286); those with a more internal locus of control are more likely to be successful. Mathematics courses completed is again positive (.152), while early childbearing is negative (-.103).

In summary, those successfully pursuing a Clerical/Sales occupation are predominantly females with substantial early work experience. Once again, a consonance between sex of the student and sex dominance of the field seems to heighten success. The strength of the coefficient for early work experience suggests that early experience in the area better enables students to complete their planned occupation. Also, this occupational category requires minimal advanced training, and hence these students have a greater opportunity to work. The positive coefficient for mathematics courses completed suggests that mathematical training is relevant for a Clerical/Sales occupation. Finally, those bearing children early are less likely to be successful; undoubtedly the demands of and interest in child-raising reduce the opportunities for successful pursuit.

Service Ten of the 14 standardized coefficients are greater than .100. The canonical correlation is .252, with an eta-squared of .064. The function is highly statistically significant, and allows accurate classification of 62.4% of the cases. A tau of .228 reflects a modest reduction in error by using the function over random assignment.

The key discriminating variables are sex (.551) and Hispanic (-.548). Remedial mathematics is also strongly negative (-.449), and mathematics courses completed is moderately negative (-.178). High school grade point average is also negative (-.355), while parental influence is moderately positive (.386). The provision of educational counseling is positive (.119), as is early work experience (.239) and locus of control (.124). However, early marriage is negative (-.105).

In summary, those who successfully attain a Service occupation are predominantly female, providing further support for the sex consonance hypothesis. Hispanics are substantially less likely to be successful, due perhaps to discrimination in the field or to increased interest in other occupations. Locus of control is positive, suggesting that those successful are slightly more likely to believe they control their life events. Parental influence is also moderately positive, suggesting that these students' parents may have supported the students' choice of occupation. Academic performance and training are negative; apparently those initially planning on a Service occupation but completing more academic preparation are more likely to divert their interests to another occupation. However, the positive contribution of educational counseling suggests that such services may be somewhat sex biased in that women may be counseled into this occupation. Early work experience is important for success in this category, perhaps due to the skills and contacts that such experience generates. Early marriage, however, is a negative predictor, perhaps suggesting that some of these females become homemakers or pursue other occupations instead. The variance explained for this function is clearly the lowest and suggests that other factors may be more relevant.

Farmer/Laborer Nine of the 14 standardized coefficients exceed .100. The canonical correlation is .367, with an eta-squared of .135. The function is highly statistically significant, and allows an accurate classification of 67.5% of the cases. A tau of .340 indicates an approximate 34% reduction in error by using the function over random assignment.

Interestingly, the key predictor for success is grade point average (.595); locus of control is also important (.381). Those successful are predominantly male, and Hispanics are somewhat more likely to be successful. (-.351 and .139 respectively). In spite of the positive coefficient for grade point average, aptitude and mathematical training are both negative (-.305 and -.180 respectively). The provision of educational counseling is again positive (.423), as is early marriage (.341). Early childbearing, however, is negative (-.493).

In summary, those successfully pursuing a Farmer/Laborer occupation are predominantly male and have a more internal locus of control. The consonance hypothesis for sex is again documented, and the importance of an internal locus of control may reflect the independence characteristic of many farmers. The greater success for Hispanics may reflect their greater commitment to a Farmer/Laborer position or may reflect a belief that this occupation affords more opportunities. The strongly positive coefficient for grade point average suggests that hard work is an important predictor of success in this category. Aptitude and coursework are much less relevant, which may show that students begin to consider other occupations as their mathematical training increases. The positive effect of counseling services suggests that such services may be supporting the pursuance of sex-appropriate occupations. The negative role of early childbearing may reflect the increased time and other costs such role transitions engender. The positive coefficient for early marriage, however, suggests that presence of a spouse (and perhaps his or her income) make it easier to assume an occupation in this category.

Military Nine of the 14 standardized coefficients exceed .100. The canonical correlation is .431, with an eta-squared of .186. However, this function fails to attain statistical significance, but still allows accurate classification of about 69% of the cases.

Although not statistically significant, the function does show that those successful are more likely to be males and to have completed more mathematics courses (-.639 and .417 respectively). Undoubtedly, mathematical training is a prerequisite for many Military occupations. The positive coefficients for high school grade point average and aptitude (.268 and .164 respectively) indicate that academic performance may better enable students to enter into a military occupation.

In summary, this function is the only function not to attain statistical significance. Undoubtedly, the lack of statistical significance is due to the relatively small sample size. However, those successful are by far the most likely to be male, with a relatively high grade point average, aptitude and mathematics coursework.

Summary The results can be summarized in two respects: those variables found to be unimportant and those variables found to be important. Regarding the former, several variables failed to enter the preliminary discriminant function analyses, and hence were deleted: coursework in foreign languages, social studies and history, and English, remedial reading, educational aspirations, aspirations held by parents, curriculum, black, SES, employment counseling, influence of teachers and counselors, and self-concept. None of these variables were statistically significant in any of the discriminant function analyses. Hence, successful pursuit of occupation is independent of several types of coursework, suggesting that high school course content has little effect on successful pursuit of occupation. The results for educational aspirations suggest that desired education does not directly contribute to successful pursuit. Curriculum placement and influence of teachers and counselors are also negligibly important, indicating that other school factors may be more relevant. Parents are clearly more important significant others than school personnel. Interestingly, employment counseling did not attain statistical significance, suggesting that such services are not very germane for occupational decision-making and attainment. The failure of black and SES to be included suggests that successful pursuit is less dependent on SES and minority status than is commonly believed. Interestingly, self-concept also failed to attain statistical significance; apparently locus of control and other factors are more important.

Turning next to those variables found to be important, sex is a very important variable, and the results document the relevance of the sex consonance hypothesis. A match between the sex of the student and the sex dominance of the occupation seems to promote successful pursuit. The variable with the second highest number of substantively significant coefficients is early work experience; such experience reduces successful pursuit for those in occupations requiring a college degree and enhances successful pursuit for several occupations requiring early apprenticeship-type experiences. Similarly, early marriage and childbearing generally reduce rates of successful pursuit among those planning on an occupation requiring a college degree, while these factors have mixed effects in the remaining occupations. Third, academic preparation and performance appear to be quite important. Both high school and college grade point averages are generally positively related with successful pursuit across the occupations, as are mathematics and science training. With the notable exception of the Teacher occupation, aptitude generally has a positive effect on successful pursuit. Together, these results document the importance of academic aptitude, training, and performance for successful pursuit, particularly among occupations requiring a college degree.

Fourth, with the exception of the Professional 2 category, the results generally indicate a positive connection between an internal locus of control and successful pursuit. These results underscore the importance of a sense of efficacy in both planning and executing occupational plans. A final conclusion pertains to the variability among the coefficients across the occupations. The results do not portray a uniform profile of those most likely to successfully pursue their planned occupation; instead the results highlight relatively unique profiles (with the exceptions noted above).

Intended Field of Study

Preprofessional. Ten of the 15 standardized coefficients exceed .100. The canonical correlation is .438, with an eta-squared of .192. The function is highly statistically significant, and allows accurate classification of 79.1% of the cases. The tau is .375 indicating about 38% reduction in error by using the function over random assignment.

The two most important discriminating variables are college grade point average (.527) and early work experience (-.424). Locus of control and high school grade point average are somewhat less important (-.355 and .302 respectively), followed by mathematics courses (.242), foreign languages courses (.216), sex (-.173), father's aspirations (.130), early childbearing (-.123), and number of social studies courses (-.121).

The key factors predicting successful pursuit of a Preprofessional field of study are college grade point average and early work experience. Clearly, high grades in college enable successful entry into a preprofessional post-graduate course of study. Early work experience significantly reduces success, due to the negative effects such work experience may have on entry into college and on performance in college. The negative coefficient for locus of control indicates that students with a more external locus of control are more likely to be successful. This finding contradicts previous findings on this variable, and suggests that students who believe that their lives are largely controlled by forces outside of themselves are more likely to be successful. Students with better mathematics and foreign languages training have a greater chance of success, perhaps because they do better on the entry exams for preprofessional courses of study. Social studies and history coursework, however, is negative, reflecting the lesser relevance of such courses. Those successful tend to be males, because most professions were dominated by males in the 1970's. Many of these students come from families where their fathers held high educational aspirations, a finding which underscores the importance of early socialization. Early childbearing and work experience detract from the time and energy devoted to studies, and hence reduce the chances for successful completion of such training.

Humanities/Arts Eight of the 15 standardized coefficients exceed .100. The canonical correlation is .340, with an eta-squared of .116. The function is highly statistically significant, and allows accurate classification of 63.5% of the cases. The tau is .283, indicating about 28% reduction in error by using the coefficients.

The three key discriminating variables are early childbearing (-.480), early work experience (-.425), and college grade point average (.406). The other variables have much less substantive importance. Both aptitude and high school grade point average have positive coefficients (.196 and .198 respectively), as do the number of social studies courses and foreign languages courses (.174 and .126 respectively). Finally, those subject to teacher's influence are somewhat less likely to be successful (-.102).

In summary, those most likely to pursue a Humanities/Arts course of study have high academic aptitude and performance, as well as preparation in social studies and foreign languages. Many fields of study in the humanities and arts require substantial academic performance. Interestingly, those with greater teacher influence are less likely to successfully pursue this field; perhaps teachers discourage students from pursuing this field in college. The second general conclusion is that marriage and work in the early years reduce chances for successful pursuit. These commitments may simply detract from the time and energy required for the successful attainment of a degree in the humanities and arts.

Education Thirteen of the 15 standardized discriminant functions coefficients exceed .100. The canonical correlation is .395, with an eta-squared of .156. The function is highly statistically significant, and allows accurate classification of 67.7% of the cases. A tau of .320 indicates reduction in error of 32% .

The key discriminating variable for this field is college grade point average (.463). Several other variables have somewhat lower discrimination power: aptitude (-.339), early work experience (-.355), number of mathematics courses (.332), early childbearing (-.300), and sex (.337). The remaining variables are of somewhat less substantive importance: educational counseling (.249), locus of control (.207), high school grade point average (.169), father's educational aspirations (.135), foreign language coursework (.123), science coursework (.111) and social studies coursework (.106).

In summary, the results underscore the importance of college academic performance as well as academic preparation, but also show that aptitude is inversely related to successful pursuit. Those who successfully study the field of education, therefore, are less academically capable but more academically committed in terms of preparation and performance (at the college level). Females are more successful, again supporting the sex consonance hypothesis. Those successful are also more likely to note the provision of educational counseling, perhaps because they are sensitive to such services. The positive effect of father's educational aspirations indicates the importance of this socialization variable, and the negative effects of early childbearing and work experience indicates that such commitments interfere with the pursuit of and completion of coursework in the field of education. Finally, an internal locus of control predicts successful pursuit: those with a greater sense of efficacy are more successful.

Business Eleven of the 13 standardized coefficients exceed .100. The canonical correlation is .413, with an eta-squared of .171. The function is highly statistically significant, and allows accurate classification of 63.8% of the cases. A tau of .293 indicates about 30% reduction in error by using the function.

Three variables emerge as the most substantively significant in terms of discrimination power: social studies coursework (.339), early childbearing (-.323), and aptitude (.314). Early work experience and sex are also negative (-.180 and -.297 respectively), and parental influence and father's educational aspirations are both positive (.181 and .129 respectively). Both college and high school grade point average are positive (.217 and .177 respectively), as are mathematics coursework and educational counseling (.217 and .129 respectively).

In summary, successful Business students are those with high academic aptitude, performance, and preparation in mathematics and social studies. These academic characteristics may reflect the competition for entry into many Business programs. The positive effects for parental influence and father's aspirations reflects the importance of early socialization for education. The fact that males are more likely to be successful may again reflect the congruence hypothesis between sex of aspirant and sex dominance of occupation. Finally, both family and work commitments reduce chances for success.

Social Science. Only six of the 15 standardized coefficients exceed .100. The canonical correlation is .302, with an eta-squared of .091. The function is highly statistically significant, and allows accurate classification of 72.0% of the cases. A tau of .361 reflects about 36% reduction in error.

The single most discriminating variable is college grade point average (.604). Other important variables are early work experience (-.552), early childbearing (-.346), and foreign languages coursework (.333). Variables of lesser importance include sex (-.238) and number of science courses (.135).

The results show that successful pursuit of a Social Science field of study is primarily dependent on the absence of early family and work commitments, as well as on high academic performance in college. Males are somewhat more likely to be successful, a finding which differs from several previous findings indicating a consonance between sex of student and sex dominance of the field. Specific coursework relevant for success include foreign language and science.

Biology/Physical Science/Mathematics Eleven of the 15 standardized coefficients exceed .100. The canonical correlation is .410, with an eta-squared of .168. The function is highly statistically significant, and allows accurate classification of 75.0% of the cases. A tau of .365 indicates about 37% reduction in error in classification.

The two most significant variables are teacher influence (.475) and early work experience (-.363). Variables of somewhat lesser importance include father's educational aspirations (-.274), high school grade point average (.177), college grade point average (.281), aptitude (.266), educational counseling (-.224), early childbearing (-.271), and coursework in mathematics (.186), social studies (-.141) and foreign languages (.166).

In summary, successful pursuit of this field is primarily dependent on teacher influence and early work experience. Teacher influence is apparently helpful for what is often considered an academically difficult course of study. Together with the negative effect of early childbearing, the negative effect of early work experience again documents the deleterious effect of early commitments outside of school. The results clearly show the importance of academic aptitude, performance, and preparation, with the exception of social studies courses; such courses are less relevant for these fields of study. Interestingly, father's educational aspirations has a negative coefficient; those successful are less likely to experience such expectations.

Computer/Engineering/Architecture Eight of the 15 standardized coefficients exceed .100. The canonical correlation is .397, with an eta-squared of .158. The function is highly statistically significant, and allows accurate classification of 68.9% of the cases. A tau of .311 indicates an approximate 31% reduction in error by using the function over random assignment.

The two key discriminating variable are college grade point average (.331) and early work experience (-.327). Next in importance are number of mathematics and social studies courses (.270 and -.168 respectively), followed by the provision of educational counseling (-.180), sex (-.147), locus of control (.140), and father's aspirations (.110).

In summary, the most important discriminating factors for those planning to study Computer/Engineering/Architecture are college grade point average and early work experience. The strength of the coefficients suggests that a high grade point average is required for successful entry into and completion of the post-graduate training these fields frequently involve. The negative coefficient for work experience suggests that such experience diverts attention and time from studies, thereby detracting from successful pursuit. The positive coefficient for mathematics courses undoubtedly reflects the mathematical demands in these fields, while the negative coefficient for social studies undoubtedly reflects the lesser relevance of such courses. The negative coefficient for the provision of educational counseling suggests that students in schools with such counseling are less likely to be successful. Males are clearly more likely to be successful, offering further support for the sex consonance hypothesis. Locus of control and father's educational aspirations are both positive; a belief in self-control over life events is important, as are parents who share their children's educational aspirations.

Agriculture/Home Economics/Vocational Nine of the 15 standardized coefficients are greater than .100. The canonical correlation is .365, with an eta-squared of .133. The function is highly statistically significant, and allows accurate classification of 67.9% of the cases. A tau of .230, however, indicates a rather modest reduction in error using the function over random assignment.

Early work experience has the strongest coefficient (-.542), followed by foreign language coursework (-.444), mathematics coursework (.417), and parental influence (.403). Variables with a lesser role include high school and college grade point averages (.352 and .295 respectively), aptitude (.139), social studies coursework (-.102), and early childbearing (-.213).

In summary, those successfully pursuing an Agriculture/Home Economics/Vocational field of study are most likely to have had little early work experience and fewer children in the early years, both of which may provide greater time and opportunity for pursuit of studies. Mathematics coursework is substantially positive, while foreign languages and social studies coursework are negative; perhaps the mathematical training obtained is used in college while social studies and foreign languages are much less relevant for this category. Both academic aptitude and performance are also important, underlying the importance of such aptitude and performance in what are traditionally considered to be less academically defined areas. Parental influence is also important, although teachers' influence is quite minimal.

Health Ten of the 15 standardized coefficients exceed .100. The canonical correlation is .471, with an eta-squared of .222. The function is highly statistically significant, and allows accurate classification of 68.7% of the cases. A tau of .353 reflects an approximate 35% reduction in error in using the function over random assignment.

The most important discriminating variable is sex (.610), with females much more likely to be successful. Also important are high school grade point average (.384) and science coursework (.378). Of lesser importance are father's aspirations (-.148), aptitude (.131), coursework in mathematics (-.200), social studies (-.113), and foreign languages (.205), and early childbearing and work experience (-.256 and -.222 respectively).

That females are much more likely to be successful again supports the sex consonance hypothesis. Also important are high school grade point average and science coursework. Apparently high academic performance enables entry into and successful completion of a Health field of study; science coursework is particularly relevant given the demands of most Health occupations for scientific training. Mathematics, foreign languages and social studies coursework are less important. Aptitude is also positive, suggesting that successful pursuit is linked with academic aptitude. Father's educational aspirations is negative, suggesting that many of those who successfully pursue a Health field of study may be engaged in status mobility. Finally, both early childbearing and early work experience are negative predictors, supporting the previously discussed concept of alternative time and energy demands.

Summary Once again, the results can be summarized in terms of the variables found to be unimportant and those found to be important. Those variables deleted from the final discriminant function analyses due to their statistical insignificance in the preliminary discriminant function analyses include: English coursework, remedial mathematics and reading, educational aspirations, aspirations of mother, early marriage, high school program, Hispanic, black, SES, employment counseling, influence of counselors, and self-concept. Most students have completed a fairly high number of English courses, and hence this variable lacks discrimination power. The failure of remedial coursework to be included may be explained through the inclusion of aptitude and various academic performance indicators. The failure of educational aspirations to be included seems to suggest that successful pursuit of field of study is largely independent of the actual educational aspirations. Alternatively, aspirations may be linked with a number of other variables which are included in the analyses, such as aptitude and grade point average. The failure of curriculum to enter the analyses suggests that the tracking commonly associated with curriculum placement has few deleterious effects on successful pursuit of occupation. Both minority status and SES are also omitted, perhaps due to their connection with some of the variables included in the equation. The omission of employment counseling and counselor influence suggests that counselors play a fairly minimal role in assisting students in occupational selection and strategy building. The exclusion of self-concept highlights the relative unimportance of this personal orientation; apparently locus of control is more critical.

The variables found to be important support several conclusions. First, support again is offered for the sex consonance hypothesis: a match between the sex of the individual and the sex dominance of the field enhances successful pursuit. Second, both early work experience and early childbearing have consistent negative effects on successful pursuit. The results show clearly that outside school involvement and commitments detract from successful pursuit. Third, the results document the importance of academic performance and training, and to a lesser extent, aptitude. However, such findings are consistent with studying a subsample planning to attend college the following year. Nonetheless, these results show that it is inportant to perform well, especially in college, in order to successfully complete many fields of study. Fourth, in spite of these similarities, a wide range of coefficients exists within the fields. These results suggest that there is no one best avenue for successful pursuit for all fields, although the few variables noted above have more general relevance. Finally, the relatively low levels of variance explained suggest that factors other than those examined are relevant.

This chapter examined the factors associated with successful pursuit of planned occupation and field of study. The previous chapter focused on the changes in several predictor variables in each occupation and field of study category. The next chapter examines in greater detail the factors associated with selecting each ocupation and field of study category.

CHAPTER 5

Research Issue 3: In-Depth Analysis of 1980 Seniors

This report has examined the changing occupational and field of study choices among high school seniors as well as the changes in several predictor variables in each occupation and field category (Research Issue 1). It has also examined the differential success rates for those pursuing each occupation and field category as well the relationships between several predictor variables and successful pursuit of each occupation and field category (Research Issue 2).

The report now turns to a more in-depth analysis of factors associated with selecting each occupation and field category. This research issue differs from Research Issue 1 in several respects. First, that research issue focused on the changes in several predictor variables within each occupation and field category, whereas this research issue focuses on the nature of those selecting each category. Although comparisons are now drawn about the relative magnitude of the value of each variable in comparison to the same value in the other occupation/field categories, the focus now is on the nature of those selecting each category rather than on the changes that have occurred in the variables over the last decade. Second, only one cohort is examined, the 1980 cohort. As a result a much wider variety ot variables can be included. Third, given these differences, the statistical procedures used were different. Analysis of variance was used for the bivariate analyses (the first subtopic) and discriminant function analysis was used for the multivariate analyses (the second subtopic).

Subtopic 1: Bivariate Analyses of Independent Variables

The first subtopic includes bivariate analyses of the linkages between a variety of independent variables and selecting a given occupation or intended field of study. Several categories of variables will be examined. Background variables include sex, race, locus of control, self-concept, SES, educational aspirations, mother's educational aspirations, parental influence, and having been read to before beginning school. School-related variables include academic aptitude and performance, curriculum placement and coursework completed, participation in special programs, academic involvement, participation in extracurricular activities, and assessment of several school factors. Work-related variables include the importance of work and money, the importance of various values in selecting an occupation, and work status. Finally, the expectation variables include expectations for early marriage, early childbearing, and number of children.

The focus in the first subtopic is on how each variable is linked with selecting an occupation/field category. This focus necessitates a comparison of the value for a given category with the same values for the other categories to determine its relative position as well as the statistical significance of these differences. Analysis of variance was used to assess the statistical significance among the categories for each variable, and inspection of the rank order of the values for a given variable was employed to assess the substantive importance of each variable. All variables were statistically significant in the occupation analyses, and all variables except Hispanic, "courses too hard," and educational counseling were statistically significant in the field of study analyses. Hence, the analysis focuses on the relative size of the values by concentrating within each category on those values which are among the highest or lowest values as compared to the other categories.

The results are analyzed per occupation/field category rather than per variable for two reasons. First, such an approach is more congruent with the overall emphasis on understanding why adolescents select a given category and why some are more successful than others in attaining their choices. Second, such an approach is more consistent with the analysis framework presented in earlier chapters and hence fosters continuity. The results for planned occupation are reported in Table 5.1 and the results for intended field of study are reported in Table 5.2. Since family expectations generally vary by sex (Waite and Moore, 1978), the results for these variables will be examined for sex differences. Given the sizes of some subgroups, .05 will be used as an indicator of statistical significance.

Planned Occupation

Professional 2 Almost all the values in this category fall in the highest or lowest rankings among the occupational categories. The few which do not include sex, percentage black, importance of job security, and expected number of children. Turning first to the background variables, the percentage white is one of the highest at 83.1% and the percentage Hispanic is among the lowest at 6.0%. The remaining background variables all have the highest values among the occupational categories: self-concept (.17), locus of control (.25), SES (.31), educational aspirations (4.32), mother's educational aspirations (4.38), parental influence (37.9%), and "read to" (61.5%).

Regarding school-related variables, those aspiring to a Professional 2 occupation have the highest aptitude (55.71), the highest grade point average (3.24), and are the most likely to be found in the academic curriculum (69.9%). They have completed more coursework than those in the other categories: mathematics (4.97), English (6.03), science (4.69), history and social studies (4.85), and foreign languages (2.66). Similarly, they are the least likely to have taken remedial mathematics and English (16.0% and 17.7% respectively), and are the most likely to have completed advanced mathematics and science courses (3.24 and 1.15 respectively). They are the least likely to have completed vocational coursework (2.72) and to have participated in co-op or work-study programs (10.0%).

Those aspiring to a Professional 2 occupation are the least likely to report difficulty due to courses being too hard or due to poor study habits (1.6% and 14.0% respectively), and complete the greatest amount of homework (4.12). They are among the least likely to be absent (2.34), and rate their academic instruction the highest (2.91). They also have the highest participation rates in several forms of extracurricular activities: sports (1.08), academic activities (1.03), and service activities (.30). They are among those most likely to feel that their school should emphasize academics more (69.4%) and among the least likely to feel that their school should emphasize vocational preparation and practical work experience more (51.8% and 47.5% respectively). They are the second most likely to agree that their schools provided educational counseling (66.7%) and the least likely to note that their school provided employment counseling (32.2%). Finally, they are the second most likely to note that teachers had a great deal of influence on their plans (17.7%).

Regading work variables, those aspiring to a Professional 2 occupation are the third most likely to agree that work is important (90.7%) and one of the least likely to note the importance of money (29.2). Regarding the work values, they score highest on interesting work (92.5%) and freedom to make decisions (67.3%), and score among the lowest on the experience, good income, and meet people values (22.2%, 37.7%, and 61.3% respectively). Finally, they are among the least likely to be working full-time (7.4%).

Regading expectations, they are the least likely to expect early marriage (12.1%) and early childbearing (3.4%). Their expected number of children is also relatively low (3.18). Sex differences exist for two of these variables: 8.3% of males and 16.5% of females expect early marriage, while 2.1% of males and 4.6% of females expect early childbearing.

In summary, the most notable feature among those aspiring to a Professional 2 occupation is their extremely high or low positions on the independent variables relative to the other occupational categories. The data show clearly that those aspiring to a Professional 2 occupation are unique in a number of respects. They have the highest SES score and score the highest on several variables typically related to SES: self-concept, locus of control and educational aspirations. These results, plus their high position on the parental influence and "read to" variables clearly indicate an early socialization experience geared towards acquiring an advanced education. Although not the highest, the percentage white is higher than average and the percent minorities are lower than average; the percentage female is about average. In short, socialization seems more relevant than do demographic factors.

The data show clearly the relevance of academic aptitude, performance and preparation. The data also show clearly the role of commitment to and involvement in school experiences; these students are the least likely to experience difficulties with their studies and the most likely to complete homework assignments and feel that school should emphasize academics more. In addition to their academic involvement, they are also more likely to be involved in extracurricular activities. In short, the school experience variables reflect a high level of preparation and commitment.

Although not the highest, they are quite likely to emphasize the importance of work and to stress the values of interesting work and freedom to make decisions, while downplaying the importance of money, experience, and meeting people. These values are consistent with many of the Professional 2 positions. Undoubtedly due to the demands of their academic preparation, they are quite unlikely to be working full-time. Finally, also consistent with the demands of their academic preparation, they are the least likely to expect early marriage and childbearing.

Professional I Those aspiring to a Professional I occupation have the top rankings on several of the background variables. They are third highest on SES (.10), educational aspirations (3.68), mother's educational aspirations (.81), parental influence (32.9%), and "read to" (56.3%). They are second highest on locus (.12), and fourth highest on self-concept (.06). The percentage Hispanic (5.4%) is among the lowest, and the percentage black (12.0%) is among the highest.

They also rank among the highest on several of the school experiences variables. Aptitude (52.44), homework completed (3.75), and grade point average (3.01) are the second highest, as are coursework in science (3.83), history and social studies (4.73), foreign languages (2.08), advanced mathematics (2.63), and advanced science (.76). They rank third in the number of mathematics courses (4.44) and English courses (5.99). Similarly, they are among the least likely to have completed remedial mathematics and English (24.2% and 24.9% respectively), and they are among the least likely to have completed vocational coursework (3.69) and to have participated in co-op or work study programs (14.5%). In line with these coursework experiences, they are among the most likely to be in the academic curriculum (52.2%) and among the least likely to be in the general and vocational curricula (32.5% and 15.1% respectively).

They are also among the most likely to complete homework (3.75) and to rate their academic preparation highly (2.78). As other indicators of academic involvement, they are among the least likely to report course difficulty (2.2%), difficulty with study habits (16.6), and to be absent (2.41). They are also among the least likely to feel that their schools should emphasize vocational training and practical work experience to a greater extent (63.8% and 55.7% respectively). They are quite likely to report the provision of educational counseling (63.4%) as well as counselor and teacher influence

(11.9% and 17.1% respectively), while among the least likely to report the provision of employment counseling (37.3%). Finally, they are among the most likely to have participated in several extracurricular activities: sports activities (.97), academic activities (.85), and service activities (.22).

Like those in the first category, those aspiring to a Professional 1 occupation stress the importance of work (90.9%) and note the importance of interesting work as a central value in selecting an occupation (89.6%). Regarding expectations, they are the second least likely to expect early marriage and childbearing (20.7% and 6.7% respectively), although the number of expected children is relatively high (3.21). Sex differences exist on all three family formation expectations: 12.2% of males and 26.6% of females expect early marriage, 4.4% of males and 8.1% of females expect early childbearing, and males expect 3.15 and females expect 3.25 children.

The profile for those aspiring to a Professional 1 occupation somewhat parallels that in the Professional 2 category. They rank high on SES and such SES-related variables as self-concept, locus of control, educational aspirations, mother's aspirations, parental influence, and "read to." Although the percentage black is fairly high, the percentage Hispanic is fairly low. It again seems that socialization factors seem the most relevant. Seniors in this category receive substantial support for educational activities and have developed a high self-concept and an internal locus of control. The school experience variables again document the role of academic aptitude, performance, and training, as well as academic commitment and freedom from academic difficulties. Once again, these seniors are substantially influenced by school personnel, suggesting that school personnel particularly encourage the pursuit of professional occupations. Their involvement in extracurricular activities underscores their total involvement in the school. Seniors in this category also highly value work and stress the importance of interesting work in making a decision on the type of work they wish to pursue. Finally, it seems that these students recognize the complicating effect of early marriage and childbearing in their pursuit of advanced training.

Technical Only three of the background variables have values that rank among the highest in the occupational categories. Self-concept (.09) ranks second, educational aspirations (3.15) ranks fourth, and percentage black (14.5%) is tied for second ranking; the percentage white (78.6) is among the lowest.

Several of the school-related variables also rank high. Both aptitude and grade point average are among the top four values (50.85 and 2.88 respectively), and the number of mathematics courses and science courses completed rank second and third (4.50 and 3.68 respectively). Similarly, those aspiring to a Technical occupation rank third in terms of advanced mathematics and science courses completed (2.50 and .70 respectively). They are also among the most likely to be in the academic curriculum (40.0%) and among the least likely to be in the general curriculum (34.0%). They are among the most likely to have completed vocational coursework (4.37). Their commitment to academic work is high, as seen in the amount of homework completed (3.49), their high assessment of the academic quality of their schools (2.73), their belief that schools should emphasize academics more (68.8%), their lack of difficulty with coursework and study habits (2.3% and 16.3% respectively), and their low absenteeism (2.37). The importance of vocational training for these students is seen in the high number of vocational courses completed (4.37) and in the high percentage believing that schools should emphasize vocational training more (75.5%). They are among the most likely to note the provision of educational counseling (66.1%) and to report relatively high levels of counselor and teacher influence (12.5% and 15.5% respectively).

Those aspiring to a Technical occupation rank the highest in terms of the importance of work (91.8%) and are among those most likely to be working full-time (13.0%). Money and security are important to students in this group, as evidenced in the importance of money variable (32.7%) and in the importance of good income and job security in selecting an occupation (53.0% and 65.8%). Of less importance in selecting an occupation are the freedom to make decisions (56.2%) and the importance of meeting people (59.9%), both among the lowest values. Regarding expectations, the total number of children expected is among the lowest (3.09); males expect 3.04 and females expect 3.16 children. Although early marriage and childbearing expectations are in the middle range among the occupations, sex differences do exist: 17.8% of males and 36.7% of females expect early marriage and 5.2% of males and 11.5% of females expect early childbearing..

In summary, those aspiring to a Technical occupation are more likely to be black and less likely to be white, and are more likely to have a high self-concept and high educational aspirations than those in the other occupational categories. Most notable is their emphasis on both academic and vocational training. They have high aptitude and high grade point averages, and have completed more mathematics and science courses than students in most of the other categories. Yet they are also among the most likely to have completed vocational coursework and to feel that their schools should emphasize vocational training to a greater degree. Their level of academic commitment is also high, as reflected in the amount of homework completed, the lack of difficulty with coursework and study habits, and the low absenteeism. Perhaps because of this attention to both academic and vocational preparation, they are quite sensitive to counselors' and teachers' influence. Work is of great importance to this group, and they particularly emphasize good income and job security as reasons for selecting their occupation. In short, those aspiring to a Technical occupation are characterized by substantial academic and vocational preparation and commitment.

Teacher Those desiring to become a Teacher score higher than most of the other occupational groups on several background variables. The percentage female (81.9%) is the third highest, as is the percentage white (85.0%); the percentage black

(8.7%) is among the lowest. SES is the fourth highest and locus of control is the third highest (.02 and .06 respectively). Also, educational aspirations, mother's educational aspirations, parental influence, and "read to" are all the second highest (3.83, 3.86, 34.0%, and 56.7% respectively). Aptitude and grade point average are among the top four values (50.60 and 3.01 respectively), the number of English and foreign languages courses are among the top three values (6.00 and 2.01), and the percentage in the academic curriculum is the third highest (47.6%). Similarly, the percentages completing remedial mathematics and English are among the lowest (27.0% and 28.1%). Interestingly, advanced mathematics is the fourth highest (2.22). The unimportance of vocational preparation for those planning to become teachers is seen in the low number of vocational courses completed (3.30), the low participation in co-op and work-study programs (12.6), and the relatively low percentages agreeing that schools should place more emphasis on vocational training and practical work experience (60.5% and 54.8%).

The commitment of future teachers to academics is seen in the relatively high amount of homework completed (3.68), the low absenteeism rate (2.29), the high rating given academic quality (2.77), and the belief that schools should place more emphasis on academics (70.8%). These seniors are the most likely to feel that their schools provided educational counseling (60.0%), and report the greatest influence of counselors and teachers (13.4% and 24.1%). The fact that the percentage for teacher influence is considerably higher than the next highest value underscores the role modeling effect teachers have on those who aspire to become teachers. Finally, members of this category are the second most likely to become involved in all three forms of extracurricular activities: sports activities (1.04), academic activities (.95), and service activities (.24).

Most notable among the work values are the comparative unimportance of money (17.5%) and good income (25.7%) in selecting an occupation. Job security also plays a relatively minor role (45.0%), while interesting work, meeting people, and the freedom to make decisions are all among the highest in the occupational categories (90.0%, 73.9%, and 64.7% respectively). Future teachers are the least likely to be working full-time (6.1%). Regarding expectations, the number of children expected (3.46) is the second highest. Regarding early marriage, 20.0% of males and 31.4% of females have such expectations.

In summary, future teachers are more likely to be female and white and less likely to be black than those pursuing other occupations. They also come from relatively high SES backgrounds and have high internal locus of control, educational aspirations, parental influence, and early reading experience. In short, the data show future teachers to come from a background emphasizing education and skills associated with education. Future teachers have relatively high academic aptitude and performance, and score high on the several indicators of academic involvement. In contrast, they place little emphasis on vocational preparation and work experience, and are the least likely to have full-time work experience. Also, future teachers are highly involved in extracurricular activities, and are particularly influenced by both counselors and teachers. This latter finding suggests that those planning on a particular occupation are most influenced by those in that occupation. The reason why the percentage noting teacher influence is so much greater for future teachers may be the fact that those aspiring to other occupations do not have similar role models. Consistent with the low salaries, future teachers place little importance on money and job security; this latter finding may reflect the recognition that tenure provides job security. Although money may not be important, future teachers value interesting work, the opportunity to meet and work with people, and the freedom to make decisions. In short, future teachers show high academic involvement and performance, downplay the role of money, and come from a background emphasizing education and an internal locus of control.

Manager/Proprietor The percentage black in this category (12.0%) is tied for the fourth highest value, and the percentage Hispanic (5.1%) is the second lowest value. The SES background for those in this group is the second highest (.13), and the self-concept and locus of control scores are the third and fourth highest (.07 and .04 respectively). Mother's educational aspirations and parental influence are also the fourth highest (3.46 and 32.3% respectively).

Few school variables are associated with selecting a Manager/Proprietor occupation. The number of history and social studies courses and English courses are the third and fourth highest (4.71 and 5.90 respectively). Students in this category are among the most likely to report study habit difficulties (19.7%), and they are among the least likely to report the provision of employment counseling (42.5%). Finally, they are third and fourth most likely to participate in sports and service activities (1.01 and .20 respectively).

Those planning on a Manager/Proprietor occupation are the third most likely to note that work and money are important (90.7% and 37.8% respectively). Also, students in this category are the only ones noting that all of the work values are important in terms of selecting an occupation; all six work values have scores that are among the four highest, and the freedom to make decisions is the single highest among the occupational categories (70.1%). They are also among those most likely to have full-time work experience (15.7%), and are among the least likely to expect early childbearing (7.4%). While the values for early marriage and expected number of children are in the middle range of the occupations, significant sex differences exist: 18.1% of males and 30.4% of females expect early marriage and males expect 3.14 and females expect 3.26 children.

In summary, the two most striking features of those planning on a Manager/Proprietor occupation are the relative unimportance of school variables and the uniform importance of all six work values. These results suggest that selecting this occupation is more contingent on work values and the importance of work and money than on such school-related factors as aptitude, performance, or academic preparation. These data, along with the high percentage with full-time work experience, underscore the importance of the work role for those desiring an occupation requiring the ability to manage. The background variables show the importance of SES and parental expectations and influence.

Craftsman/Operative Students in this category score considerably lower on several background variables. They are the second least likely to be female (10.2%), they are the most likely to have an external locus of control (-.24), they have the lowest educational aspirations (1.88), their mothers have the lowest educational aspirations (2.35), and they are the least likely to have been read to before entering school (39.3%). The percentage Hispanic (7.6%) is one of the highest values.

Several of the school variables are also among the lowest values. Students in this category have the lowest academic aptitude and grade point average (46.20 and 2.45 respectively), and they are among the least likely to have completed English, science, history and social studies, and foreign languages coursework (5.59, 2.86, 4.46, and .67 respectively). They are also the most likely to have completed remedial mathematics and English (45.1% and 45.8% respectively). The relevance of vocational training for students aspiring to a Craftsman/Operative occupation is seen in the high percentage in the vocational curriculum (40.5), the number of vocational courses completed (5.00, the highest value), participation in co-op and work study programs (32.6%, the highest value), and in the high percentages noting that their schools should emphasize vocational training and practical work experience to a greater extent (84.0% and 64.4% respectively, the highest and second highest values).

Their low level of academic involvement is seen in the low amount of homework completed (2.72, the lowest value), course difficulty (4.8%, the third highest value), and in their absenteeism (2.67, the second highest value). They also give one of the lowest scores to the academic quality of their schools (2.59), and are among the least likely to feel that schools should place more emphasis on academics (63.0). These conclusions are also substantiated by the results for counseling services; these students are the least likely to note the provision of educational counseling (57.8%) and the third most likely to report the provision of employment counseling (51.3%). In addition to academic noninvolvement, these students are the least likely to become involved in academic and service activities (.51 and .09 respectively), and among the least likely to become involved in sports activities (.78).

Although work importance has only an average value, the money importance value is the highest (42.0%). This emphasis on money is also seen in the importance of good income as a central work value (56.3%, the highest value among the occupations). Students aspiring to a Craftsman/Operative occupation are also the second most likely to value experience in selecting an occupation (38.5%), and are also among the least likely to value interesting work (76.6%) and meeting people (58.5%). Again consistent with their emphasis on work, they are the second most likely to have a full-time work experience (20.3%). Regarding expectations, they expect the lowest number of children (3.01). Significant sex differences exist for both early marriage and childbearing: 28.7% of males and 39.2% of females for the former and 10.7% of males and 17.8% of females for the latter.

In summary, those aspiring to a Craftsman/Operative occupation are best characterized by low academic aptitude, performance, preparation, and commitment, and by commitment to vocational training and work experience. In addition, money is very important to the students. Their background is characterized by a minimal emphasis on education and by socialization fostering an external locus of control.

Clerical/Sales Those aspiring to a Clerical/Sales occupation have been traditionally female; the data support this predominance of females (87.1%), the second highest value among the occupational plans categories. The percentage

Hispanic (7.7%) is also the second highest, and the percentage black (14.5%) is tied for the second highest. Similarly, the percentage white (77.9%) is the second lowest. Also, the SES score (-.30) is the second lowest, as is the self-concept score (-.15).

Those aspiring to a Clerical/Sales occupation have the second lowest aptitude score (46.31) and are among those least likely to be in the academic curriculum (17.8%); the percentage in the vocational curriculum (46.8%) is the highest. They are also among the least likely to complete such academic coursework as mathematics (3.40) and science (2.64), and the percentage completing advanced science courses is the lowest (.23). They are also the least likely to have completed history and social studies courses (4.45). Their focus on vocational preparation is seen in the relatively high number of vocational courses completed (4.99), their high rate of participation in co-op and work study programs (26.5%), and in their agreement that their schools provided employment counseling (55.7%), the highest value. Interestingly, they are no more likely than most other occupational categories to feel that their school should increasingly emphasize vocational training and practical work experience. Neither do the data suggest undue academic difficulties; the percentage noting study habit problems is the lowest (13.3%), and the amount of homework completed and grade point average are both in the average range. While participation in academic and service extracurricular activities are in the average range, they are among the least likely to participate in sports activities (.74).

Although those aspiring to a Clerical/Sales occupation are among the least likely to note the importance of money as a general value (26.9%), they are among the most likely to note the importance of good income for selecting an occupation (52.7%). They are the most likely to note the importance of meeting people as a central work value (75.0%), and second and third most likely to note the importance of job security (63.7%) and previous work experience (36.0%). The freedom to make decisions ranks comparatively low (56.5%). Regarding expectations, these seniors are the second most likely to expect early marriage and early childbearing (46.4% and 16.5% respectively). Significant sex differences exist on these two variables: 25.0% of males and 49.0% of females expect early marriage and 11.2% of males and 17.1% of females expect early childbearing.

In summary, those aspiring to a Clerical/Sales occupation are predominantly female, and minority group members are more highly represented in this occupational category than in most of the others. Perhaps these occupations have been traditionally easier to enter for women and minorities. The relatively low SES score indicates that this category continues to attract predominantly lower SES seniors. Perhaps because many of these occupations are not as demanding as some of the others, the self-concept score is quite low for those entering this category. While the aptitude of these aspirants is quite low, their academic performance is average. However, they are very unlikely to be in the academic curriculum and to have completed academic coursework, and are very likely to be in the vocational curriculum and to have completed vocational coursework. They are also very attuned to the provision of employment counseling in their schools.

While students in most occupational categories have very similar scores on the importance of money as a general value and the importance of a good income as a work value, these students are unlikely to note the general importance of money but very likely to note the importance of a good income in selecting an occupation. Perhaps these (predominantly) women do not identify money as a core value, but recognize the importance of a good income for themselves and for men in selecting an occupation. They are also very likely to stress the importance of meeting people, a work value more characteristic of women. Experience and job security are also important work values. Again perhaps due to the preponderance of women, these students are very likely to expect early marriage and early childbearing. In short, the profile is one of lower social class women, and to some extent minorities, who downplay academic preparation and stress vocational preparation, who stress primarily job security and meeting people as work values, and who expect early family formation.

Service Those aspiring to a Service occupation are also among the most likely to be female (68.1%) and Hispanic (7.6%). They are among the least likely to have experienced parental influence (23.3%), and have among the lowest self-concept and locus of control scores (-.11 and -.16 respectively).

Regarding school-related variables, they are the most likely to be in the general curriculum (51.7%), and have one of the lowest mean aptitude scores (46.45) and grade point averages (2.61). Also, they are among the least likely to have completed coursework in mathematics (3.40), English (5.76), and foreign languages (1.13). Similarly, they are the third most likely to have completed both remedial mathematics and English (42.2% and 40.7% respectively). While their vocational coursework is only average, they are among the most likely to have participated in co-op and work study programs (26.2%). Their relative lack of academic commitment is also seen in the comparatively low amount of homework completed (3.17), difficulties related to coursework and study habits (4.9% and 18.7%), and high absenteeism (2.65), the third highest value. Similarly, they are among the least likely to rate their schools high in academic performance (2.58). Their emphasis on work experience is seen in the relatively high percentage noting that schools should provide more practical work experience (63.3%). They are also quite unlikely to participate in extracurricular activities, particularly academic activities (.64).

Only one of the work-related variables is outside of the average range; the percentage noting the importance of meeting people as a work value (73.0) is the third highest value. Finally, the percentages expecting early marriage and childbearing are both the third highest (40.7% and 15.5%). Sex differences also exist: 24.6% of males and 49.8% of females expect early marriage and 8.1% of males and 19.4% of females expect early childbearing.

In summary, those aspiring to Service occupations are predominantly female, have a low self-concept and external locus of control, and are quite unlikely to have experienced parental influence. Apparently the background experiences of such persons foster an interest in Service occupations, perhaps because they are less demanding. Most notable among the school-related variables are the relatively low levels of involvement in both academic and vocational preparation. Aptitude and grade point averages are quite low, as is academic coursework completed. Although their participation in co-op and work study programs is quite high and they believe schools should provide more practical work experience, their participation in vocational coursework is comparatively low, as is their belief in greater vocational training. These students seem to be quite academically uncommitted and only moderately vocationally committed, and as a result most of them are in the general curriculum. This relative inattention to work is also seen in the scores on the work-related variables, most of which are in the average range. Only the "people" variable stands out, which coincides with the focus of most service occupations. Perhaps due to the preponderance of women, many of the students in this category expect early family formation. In short, those aspiring to a Service occupation tend to avoid academics and only marginally participate in vocational training, and they tend to be females who expect to begin families quite early.

Farmer/Laborer Several background variables characterize those aspiring to a Farmer/Laborer occupation. The percentage female (13.3%) is the lowest of the occupational categories, as is the percentage black (4.7%); the percentage white (88.7%) is the second highest. The SES score for this group (-.28) is one of the lowest, as is the locus of control score (-.23). These seniors also have one of the lowest educational aspiration scores (1.93), one of the lowest scores for mother's educational aspirations (2.46), and are the second least likely to have been read to before beginning school (42.9%).

Regarding school-related variables, they are the second least likely to be in the academic curriculum (15.5%), and the third most likely to be in the general and vocational curricula (48.2% and 36.3% respectively). Regarding academic performance and preparation, their grade point average is the second lowest (2.49), and they are among those least likely to have completed coursework in mathematics, English, and foreign languages (3.40, 5.67, and .69 respectively). Similarly, they are among the least likely to have completed advanced mathematics and science coursework (1.25 and .26 respectively), and among the most likely to have completed remedial mathematics and English (44.5% and 45.8% respectively). However, they are also among those most likely to have completed vocational coursework (4.99) and to have participated in co-op or work-study programs (31.3%).

Similarly, they are the most and second most likely to feel that their schools should emphasize more practical work experience and vocational training (66.5% and 82.5% respectively), and the second most likely to note the provision of educational counseling (51.9%). However, their academic commitment is quite low as evidenced in the second lowest homework score (2.73), the highest percentage noting course difficulties (5.7%), the second highest percentage noting study habit difficulty (20.7%), and the highest absenteeism rate (2.71). Consistent with these data, they are the least likely to rate the academic quality of their school highly (2.58) and to feel that school should emphasize academics more (60.7%). Their lack of school involvement is also seen in the relatively low level of counselor and teacher influence (8.0% and 8.8%). Finally, while participation in sports and academic extracurricular activities is about average, they are the second least likely to participate in service activities (10.7).

Regarding work-related variables, they are the second least likely to note the importance of work (85.0%), although they are the second most likely to note the importance of money (38.4%). Regarding work values, they score the highest of all the occupational categories on the experience value (42.6%) and the third highest on the freedom to make decisions value (65.2%). Their scores for the job security, interesting work, and meet people work values are among the lowest (52.4%, 75.7%, and 55.5% respectively). Finally, a greater percentage of these students have full-time work experience than do students in the other categories (21.3%). Regarding expectations, they are the fourth most likely to expect both early marriage and childbearing (34.7% and 13.8% respectively). Significant sex differences also exist: 32.7% of males and 41.7% of females expect early marriage while 12.6% of males and 20.6% of females expect early childbearing.

In summary, the profile that emerges is one of white males from lower SES backgrounds, with an external locus of control, low educational aspirations, and few early educational experiences. Their school experiences are characterized by low academic performance, preparation, and commitment, and substantial vocational coursework preparation and commitment to further vocational training on the part of schools. They are also unlikely to become involved in extracurricular activities. Work does not play a major role in their general value structure, although money does. Regarding work, they particularly value experience and the freedom to make decisions; both of these are consonant with traditional form values. Perhaps consistent with traditional family formation patterns among farm families, a substantial proportion of them expect early marriage and childbearing. In short, those aspiring to a Farmer/Laborer occupation are generally lower class males who favor vocational training and devalue academics.

Military More Hispanics and blacks select the Military occupational category than any other category (8.9% and 25.0% respectively); hence, the percentage white is the lowest (66.1%). The percentage female is also quite low (25.3%), and these seniors are relatively unlikely to have experienced parental influence (20.6%) and such early educational experiences as having been read to (46.7%).

Their academic aptitude and performance is in the average range, and they have the fourth highest scores in terms of coursework in mathematics, science, and history and social studies (4.20, 3.53, and 4.68 respectively). And while they have the fourth highest score on remedial English participation (39.0%), they also have the fourth highest score on participation in advanced science courses (.55). Yet their academic commitment is quite low as evidenced in one of the lowest amounts of homework completed (3.05), the highest percentage noting study habit difficulties (21.3%), and the fourth highest percentage noting difficulty with coursework (4.6%). In spite of this relatively low commitment, they are the most likely to feel that their schools should emphasize academics to a greater extent (73.4%). Finally, they are among the least likely to report counselor and teacher influence on their plans (7.2% and 9.7% respectively).

Work is a relatively unimportant central life value for this group (87.3%), although the absolute value is still high. Regarding work values, they emphasize job security (60.8%) and deemphasize work experience and freedom to make decisions (19.5% and 47.4%) relative to those in the other occupational categories. Finally, they are among the least likely to expect early marriage and expect the second smallest number of children (21.3% and 3.07 respectively).

In summary, those planning on a Military occupation are predominantly male, and more minorities select this category than any other. This high minority concentration may be interpreted as minorities seeing the military as an avenue for status mobility. Their early socialization experiences reflect minimal parental involvement and influence; perhaps joining the military is a further step to remove respondents from parental influence. While students in most of the other occupational categories display a consistency between aptitude, academic preparation, and academic commitment, those in the Military category reflect some inconsistencies. Their academic aptitude, performance, and commitment are all quite low, although their participation in mathematics and science courses is relatively high. Perhaps such coursework affords higher placement on military tests and, therefore, higher positions. Yet they are also quite likely to have participated in remedial English. As another example, students in most of the other categories with high academic performance favor further academic emphasis; those in the Military category do not score high on academic performance and commitment, while they are the most likely to feel that their schools should emphasize academics to a greater degree. Also, students in most other categories tend to favor greater emphasis in only one or two categories, those in the Military category favor further emphasis in all three categories (academics, vocational training, and practical work experience). Perhaps these students have participated in such academic courses as science in their belief that such preparation will be beneficial to a military career, but hold the schools at least in part responsible for their relatively poor performance and commitment. Also, it is clear that these seniors value job security while downplaying experience and the freedom to make decisions; these values are highly consistent with the typical military occupation.

Housewife As expected, virtually all the people in this category are female (99.0%). They are also the most likely to be white (90.8%), the least likely of the occupational categories to be Hispanic (4.4%), and the second least likely to be black (4.8%). Their SES scores are lowest of the categories (-.31), as is their self-concept (-.17). They have the second lowest values for educational aspirations (1.92), mother's educational aspirations (2.38), and parental influence (20.8%). However, they are among the most likely to have been read to before beginning school (53.9%).

While their aptitude and grade point averages are in the average range, they have completed the least number of mathematics and science courses (3.23 and 2.62

respectively); the number of history and social studies courses completed (4.50) is also among the lowest. Similarly, they are among the most likely to have completed remedial mathematics (37.5%) and among the least likely to have completed advanced science coursework (.26). The percentages in the general and vocational curricula are the second and fourth highest (49.1% and 30.6% respectively). They are among the most likely to be absent (2.63), among the least likely to rate their schools' academic quality highly (65.0%), among the least likely to note the provision of educational counseling (58.7%), and among the most likely to note the provision of employment counseling (47.4%). They are also the least likely to note the influence of counselors and teachers (6.7% and 8.0% respectively). Perhaps because they are female, they are the least likely to become involved in sports activities (.59).

Regarding work-related variables, both work and money have the lowest values of the occupation categories (66.4% and 14.9% respectively). Unlike all other occupational categories, none of the work values are among the highest of the occupations. In fact, four are among the lowest: previous experience (25.1%), good income (35.8%), job security (43.0%), and interesting work (45.4%). The percentage with full-time work experience is the second lowest (6.2%). Regarding expectations, the students in this category score the highest on expectations of early marriage and childbearing as well as for the total number of children (70.4%, 29.9% and 3.59 respectively).

In summary, those aspiring to a Housewife occupation are predominantly white females of lower social class background. They also have a low self-concept and low educational aspirations, perhaps because there are no educational requirements for this occupation. Their low educational involvement is also seen in the school-related variables, with their low academic preparation, concentration in the general curriculum, and lack of attention to school personnel as significant others. Apparently these women do not conceive of Housewife being an occupation since work is of little importance and most of the work values are unimportant. Their major goal in life appears to be early marriage and childbearing.

Summary Several conclusions can be made on the basis of these bivariate analyses of predictors of occupational choice. First, the fact that all the variables have statistically significantly different values among the occupations indicates that those aspiring to the different occupations do, in fact, differ on these variables. Hence, the background, school-related variables, work-related variables, and family expectation variables are all important in terms of understanding the occupational choices of high school seniors.

Second, the relative magnitude of the values of the independent variables generally reflects a pattern within each occupational choice. For example, those aspiring to a Professional occupation come from a higher social class background and have a higher self-concept as well as a more internal locus of control. Their educational aspirations are higher as are the expectations held by mothers. They score high on academic aptitude, preparation, performance, and commitment, and select work values consistent with the demands and opportunities of a professional occupation. They are also the least likely to expect early family formation. As another example, those aspiring to a Craftsman/Operative occupation are primarily males who focus on vocational preparation and downplay their academic preparation and commitment. They also select work values consistent with the demands of a Craftsman/Operative occupation. As a third example, future housewives minimize their academic commitment and preparation and do not see any of the work values as relevant. In fact, work itself has little relevance for students in this category, and early family formation is a major goal.

Third, social class figures prominently in occupational choice. The social class background of students within each occupation closely parallels the prestige ranking of the occupation. Also, variables typically related to social class show differences across the occupational categories. For example, not only do higher SES students select higher SES occupations, but they are also more likely to have higher educational aspirations, higher aptitude, greater academic preparation and commitment, and place greater emphasis on such values as the freedom to make decisions and engaging in interesting work. They are also less likely to expect early family formation.

Finally, significant sex differences exist in the family expectations variables in most of the occupations. Without exception, women expect early marriage and childbearing more than do men and expect a larger family size. These results suggest that, regardless of the status of planned occupation, women still hold greater family expectations.

Intended Field of Study

Preprofessional

Several background variables characterize students in this category. They have the highest SES background (.41), as well as the highest self-concept (.29) and internal locus of control (.35). They also have the highest educational aspirations (4.74) and mother's educational aspirations (4.68). Finally, they are the most likely to experience parental influence (44.5%) and to have been read to as a child (63.1%).

Aptitude in this group is the second highest (57.23) and grade point average is the highest (3.39). Academic orientation is reflected in the highest percentage in the academic curriculum (79.1%) and corresponding lowest percentages in the general and vocational curricula (16.2% and 4.6% respectively). They have completed more foreign languages courses (2.97), history and social studies and science courses (4.92 and 4.93 respectively), and mathematics and English courses (5.19 and 6.06 respectively) than students in most other fields. Similarly, they are the least likely to have completed remedial mathematics and English (11.2% and 11.8% respectively), and they have the second and third highest number of advanced science and mathematics courses (1.29 and 3.53 respectively).

Their academic commitment is reflected in the fact that they complete the most homework (4.25), experience the least difficulty with study habits (12.8%), have one of the lowest absenteeism rates (2.21), rate their schools the highest on academic quality (2.96), and are the most likely to feel their school should emphasize academics more (72.4%). This academic involvement contrasts with their second lowest ranking on vocational coursework and participation in co-op and work-study programs (2.58 and 8.9% respectively), and in the lowest percentages favoring greater vocational preparation and practical work experience (48.2% and 44.4% respectively); they are also the least likely to note the provision of employment counseling (29.9). Those planning a Preprofessional field are the second least likely to note counselor influence (10.6%). Finally, their participation in academic and service extracurricular activities are the highest (1.07 and .36 respectively), and their participation in sports extracurricular activities is the second highest (1.16).

The percentage noting the influence of work as a general value is the highest (94.6%), and the percentage noting the importance of money is among the highest (34.0%). These students are the most likely to stress interesting work and freedom to make decisions as important work values (93.4% and 72.5% respectively), the third most likely to note job security (64.9%), and among the least likely to emphasize meeting people (60.7%). Regarding expectations, they are the least likely to expect early marriage and childbearing (8.9% and 1.2% respectively). Sex differences exist for early marriage and expected number of children: 5.4% for males and 13.2% for females for the former and 3.31 for males and 3.16 for females for the latter. Interestingly, the expected number of children for males exceeds that for females; perhaps females recognize the competing demands of a professional occupation and raising children more so than do males, perhaps because females typically carry greater responsibility for childraising.

In summary, the results closely parallel the analysis for those planning on a Professional 2 occupation discussed above. The parallel is not surprising given the fact that 87% of Preprofessional selectors plan at a Professional 2 occupation. Those intending on a Preprofessional field of study are overwhelmingly higher SES and have a higher self-concept and greater internal locus of control. In addition to aspiring to a higher level of education, they also have high academic aptitude, performance, preparation, and commitment. Correspondingly, they deemphasize vocational preparation. Given the demands of most professional occupations, it is not surprising that work is a very important value, and given the income levels of most professional occupations, it is not surprising that money is also important. The nature of most professional occupations is reflected in their core work values: the opportunity to perform interesting work and the freedom to make decisions. Finally, it is clear that these students recognize the demands of a Preprofessional course of study by planning to delay family formation.

Humanities/Arts Only two of the background variables are related to selecting this field. Mother's educational aspirations has the second highest score (4.66), while parental influence has the lowest value (33.1%). Regarding school-related variables, these students have one of the lowest grade point averages (3.06), and are among the least likely to have completed coursework in mathematics and science (4.15 and 3.53 respectively). However, they are the second most likely to have completed coursework in English (6.10) and the third most likely to have completed remedial mathematics and English (23.6% and 23.7%). A greater percentage are in the general curriculum (31.6%). The percentages noting study habit difficulties (17.6%) and the absenteeism rate (2.42) are higher for this group than for any of the other fields. Consistent with this lack of academic involvement, these students are the least likely to feel that their high schools should emphasize academics to a greater degree. Interestingly, they are the second most likely to report teacher influence (22.8%) and among the least likely to report counselor influence (10.7%). Finally, they are the least likely to be involved in sports activities (.92) and second most likely of the fields to become involved in academic extracurricular activities (1.03).

The percentage noting the importance of work is high, although somewhat lower than most of the other fields (89.3%). Important work values seem to be previous experience (33.1%) and freedom to make decisions (69.0%); job security is valued less by Humanities/Arts students than by students in any other field. Regarding expectations, these students expect the smallest family size (3.12), although sex differences exist: males expect 3.00 children while females expect 3.21. Early marriage also differs by sex: 11.3% of males and 18.7% of females expect early marriage..

In summary, relatively few variables distinguish those planning to study Humanities/Arts. One key feature seems to be their lack of academic preparation and commitment. Their scores for academic coursework completed are low, and their scores on absenteeism, study habits, and school assessment all indicate a deemphasis on academics. Interestingly, however, they are the second most likely to participate in academic extracurricular activities. It seems that these students eschew formal academic involvement for informal academic involvement. These students emphasize experience and freedom to make decisions as work values, reflecting a commitment to job autonomy.

Education Five of the background variables have values substantially different from the other fields. The percentage female is the second highest (76.5%), as is the percentage white (88.0%); the percentage black (7.1%) is the second lowest. While parental influence is second highest (39.4%), self-concept is the second lowest (.01) and SES is third lowest (.09).

The school-related variables for this group do not reflect a substantial degree of academic involvement and commitment. The academic aptitude score is the second lowest of the fields (51.35), and the percentage in the academic curriculum is among the lowest (52.1%); the percentage in the general curriculum is the highest (39.5%). Also, these respondents are among the least likely to have completed coursework in mathematics (4.16) and foreign languages (2.07). They are the second most likely to have completed both remedial mathematics and English (25.6% and 24.2% respectively), and the second least likely to have completed advanced mathematics (2.42). In spite of this academic preparation, the percentage noting difficulty with study habits is the second lowest (13.4%), and future education students are the second most likely to believe their schools should emphasize academics to a greater extent (70.0%). Similarly, they are among the least likely to feel that school should emphasize practical work experience to a greater degree (51.8%), although they are the second most likely to report the provision of employment counseling (41.6%). The role modeling effect of school personnel is seen in the comparatively high percentages of both counselor and teacher influence (14.5% and 23.6% respectively), both the highest of the fields. Finally, participation in sports activities is the highest (1.30) and participation in academic and service activities are the third highest (.98 and .30).

Both work success and money are less important general life values for education students (90.8% and 18.1% respectively). Working with people is more important for these students than for those pursuing any of the other fields (74.1%), and work experience is also quite important (30.4%). Relatively unimportant are good income and job security (24.2% and 44.1%). The percentages expecting early marriage and childbearing, as well as the expected number of children, are among the highest (22.9%, 5.2%, and 3.41 respectively). Sex differences exist for early marriage and expected number of children: 16.7% of males and 24.5% of females expect early marriage and males expect 3.24 children while females expect 3.44.

In summary, those planning to study Education in college are predominantly white females with relatively high parental influence but relatively low self-concept. Their academic aptitude and commitment to academic preparation are both weak. While they themselves have not aggressively pursued academic training, they do believe in the importance of academics as seen in their belief that their high schools should emphasize academics more. Another indirect reflection of their commitment to academics is their substantial orientation to school personnel, both the highest scores. Their participation in extracurricular activities is relatively high, particularly in sports. In short, future Education students seem committed to the school as an institution, although their own personal academic aspirations and performance are relatively weak. What matters for these people is the opportunity to work with other people; money and even work itself are of much less importance. Finally, perhaps because of the preponderance of women, future education students are more likely to expect early family formation.

Education is the other field (besides Preprofessional) with a direct parallel in the occupational categories. Hence, some comparisons can be made between the field of study results (which compare those pursuing education with those pursuing all other fields) and the occupation results (which compare those planning a teaching occupation with those planning all other occupations); the occupation results utilize the entire sample and the field results utilize only the subsample planning college attendance. Cross-classifying field and occupation shows a substantial degree of overlap between selecting the Education field and the Teacher occupation (results not reported in tables). About 70% of those planning on a Teacher occupation intend to study Education and 61% of those going to study Education plan to be a Teacher. These figures suggest that both similarities and differences can be expected in a comparison of the results for the Education field and the Teacher occupation. Besides Education, those planning on a Teacher occupation also intend to study Humanities/Arts (11%) and

Agriculture/Home Economics/Vocational (7%). Besides Teacher, those intending to study Education also plan to attain primarily a Professional 2 (12%) or a Professional 1 occupation (16%).

Which results to stress—Education or Teacher—depends primarily on the purpose of the comparison. For most purposes, an assessment of future educators would benefit more from the field (i.e., Education) analyses since such comparisons would rely only on those planning to attend college. Education selectors would therefore be compared with those selecting other college fields. Occupation (i.e., Teacher) analyses might yield somewhat inflated values on such variables as SES and aptitude since several of the other occupation categories have relatively low status.

In both analyses, those planning on an education career are predominantly female and white. While those planning on a teaching occupation have one of the highest SES scores, those intending to study Education have one of the lowest. That is, of those students planning on going to college, lower SES students are more likely to select Education as a field of study, perhaps as a means of status mobility. Parental influence is important in both analyses.

While the occupation results indicate that future teachers are among the most likely to be in the academic curriculum, the field results indicate that they are among the least likely to be in the academic curriculum. The occupation results indicate that the aptitude for future teachers is among the highest, while the field results indicate that aptitude is among the lowest. Also, the relative rank order of grade point average and coursework completed dropped considerably. While future teachers were among the least likely to have completed remedial mathematics and English when compared with other occupations, they are among the most likely to have done so when compared with the other fields. Similarly, while future teachers are among the least likely to have study habit problems and to be absent when compared to the other occupations, they are among the most likely to do so when compared to the other fields. These results suggest that the academic ability, preparation, performance, and commitment of future Education students are considerably lower than those intending to pursue other fields of study in college. However, in both analyses future teachers report the greatest influence of school personnel, highlighting the modeling effect of such personnel. Other similarities include the relative unimportance of money and job security and importance of working with people. In short, the more important of the two analyses is the field analysis since that analysis compares future teachers with those intending to pursue other fields of study in college.

Another possible comparison in the two analyses is an analysis of those selecting the Teacher occupation category who do and do not select the Education field category (results not reported in tables). Of the 50 variables examined in both the occupation and field analyses, only a few showed statistically significant differences for Teacher selectors who do and do not intend to pursue Education as a field of study. Those who do intend to pursue Education are more likely to be female (87.9% versus 71.9%), are more externally oriented (.01 versus -.07), have higher educational aspirations (4.19 versus 3.91), are less likely to come from the vocational curriculum (6.2% versus 13.3%), take more science courses (3.63 versus 3.19), are less likely to participate in co-op and work-study programs (8.6% versus 16.8%), are less likely to report study habit problems (13.2% versus 25.4%), and participate in more service extracurricular activities (.30 versus .18). In summary, they resemble each other on most variables, although those planning to pursue Education as a field of study do seem to score higher on several indicators of academic involvement and are more likely to be female. That is, males who plan to become teachers apparently are more likely to pursue fields other than Education, perhaps because they identify more with their substantive disciplines than they do with the education profession (cf. Lortie, 1975).

Business The percentage black (11.4%) is among the highest. Future business students have among the lowest educational aspirations (3.79), and mother's educational aspirations (3.87). They are among the least likely to have been read to before beginning school (55.4%), and they have the lowest locus of control score (.13).

The percentage coming from the vocational curriculum is the second highest (22.6%), while the percentage coming from the academic curriculum is the second lowest (48.1%). Their grade point average is among the lowest (3.06), and they are among the least likely to complete homework (3.73). They are among the least likely to complete coursework in English, science, and foreign languages (5.97, 3.42, and 2.01 respectively); they are also among the least likely to have completed advanced science courses (.58). However, their participation in vocational coursework and in co-op and work study programs are the second and third highest (4.34 and 16.8%). While they do not rate the academic quality of their schools very high (2.80), they do feel, more so than most other students, that their high schools should emphasize vocational preparation and practical work experience to a greater degree (64.2% and 54.6%). They are also among the most likely to note the provision of employment counseling (41.1%). They report the lowest teacher influence (14.5%) and are among the least likely to become involved in academic extracurricular activities (.85).

While work is important to students pursuing all fields, it is the third highest value for those planning on a business field of study (92.8%), and the importance of money is the highest for this group (34.7%). In terms of selecting an occupation, business students ranked the highest on good income (51.1%), second highest on job security (65.3%), third highest on working with people (71.6%), and among the lowest for interesting work (88.2%). While the values on the family expectations variables are in the middle of the values for the fields, sex differences do exist: 11.4% of males and 29.6% of females expect early marriage and 3.8% of males and 5.9% of females expect early childbearing.

In summary, those planning on a Business field of study are more likely to be black than students in most other fields of study, are more likely to have an external locus of control, and are among the least likely to have high educational aspirations and to have received early socialization supportive of educational aspirations. Their scores on the school-related variables reflect comparatively low levels of academic performance and preparation and comparatively high levels of vocational preparation and emphasis. Work and money are very important to this group. Money, job security, and working with people are the core work values held by these students. In short, the major characteristics of those planing on a Business field of study seem to be an emphasis on work and money as well as on vocational preparation. Paralleling these emphases is a deemphasis on academic performance and preparation.

Social Science The percentage of females planning on a Social Science field of study is the third highest (71.9%) and the percentage white is the second lowest (82.6%). The SES score for students in this category is the third highest (.30), as are educational aspirations and mother's educational aspirations (4.34 and 4.33 respectively), parental influence (39.0%) and "read to" (63.0%). The locus of control score is the second highest (.27).

Regarding the school-related variables, the percentage in the academic curriculum is the third highest (70.3%), while the percentage in the vocational curriculum is among the lowest (5.7%). Coursework completed in English and history/social studies are both the highest among the fields (6.14 and 5.10), and the number of foreign languages courses completed is the third highest (2.75). The number of vocational courses completed is among the lowest (2.70). While the amount of homework completed is the third highest (4.06), the percentage noting study habit difficulties and the absenteeism rate are both the second highest (17.5% and 2.38). These students are among the least likely to feel that their schools should emphasize academics and vocational preparation to a greater degree (66.7% and 56.6%

respectively). They are also among the most likely to report counselor and teacher influence on their future plans (13.8% and 18.2% respectively). Consistent with the service orientation of many social science courses, they are the second most likely to become involved in service extracurricular activities (.31).

Students in this category are among the most likely to note the importance of interesting work and freedom to make decisions as work values (92.4% and 65.6%), and among the least likely to note the importance of experience and income (20.3% and 29.4%). They are among the least likely to have full-time work experience (4.3%). Regarding expectations, their expected number of children is among the highest (3.31) and the results for early marriage differ by sex: 8.7% of males and 19.5% of females expect early marriage.

In summary, those intending to study Social Science are primarily female, come from relatively high SES backgrounds, and have experienced early socialization experiences fostering educational aspirations. They are quite unlikely to be involved in vocational preparation, and their academic involvement is mixed. While quite likely to be in the academic curriculum, to have completed English and history/social studies courses, and to complete a relatively high amount of homework, these students also are frequently absent and have considerable study habit difficulties. Their grade point average and aptitude scores are in the average range. Yet they are very sensitive to the influence of school personnel, and become quite involved in service activities. Hence, several indicators suggest considerable academic involvement and commitment, while several other indicators reflect lesser involvement.

A major reason why students select the social sciences is because they want to help people. Interestingly, meeting and working with people was not as salient for these students as for many other students. Instead, interesting work and autonomy are more important.

Biology/Physical Science/Mathematics The percentage female in this category is the second lowest (39.8%) and the percentage black is the lowest (6.7%). These students tend to come from a very high SES background (.33) and to have high educational aspirations (4.36). They score the highest on aptitude (57.42) and the second highest on grade point average (3.30). One reason may be the amount of homework completed; the mean for this category is the second highest (4.21). The percentage in the academic curriculum is the second highest (73.0%), and the amount of coursework in mathematics, science, and foreign languages are among the highest (5.37, 5.29, and 2.76 respectively). Their participation in advanced science and mathematics courses are the greatest and second greatest (1.44 and 3.55 respectively). Correspondingly, their participation in vocational coursework and co-op and work study programs are the lowest (2.47 and 7.9% respectively). Their absenteeism rate is the lowest (2.16), and their rating of their schools' academic quality is the highest (2.96). Compared to other fields, they are relatively unlikely to feel that their schools should emphasize vocational training and practical work experience to a greater extent (52.4% and 47.0%), and they are also relatively unlikely to note the availability of employment counseling at their schools (32.2%). Similarly, they are among the least likely to report counselor influence (10.0%). Finally, their participation in sports activities is among the greatest (1.12).

Neither work nor money are as important to these students as they are to students in other fields (84.8% and 23.3% respectively). Interestingly, none of the six work values have high scores relative to the other fields; instead, these students are the least likely to note the importance of experience (19.0%), good income (29.8%), job security (47.4%), the freedom to make decisions (59.5%), and working with people (53.2%). Similarly, these students are the least likely to have full time work experience (4.1%). Regarding expectations, these students are among the least likely to expect early marriage and childbearing (9.0% and 1.8%), and their expected number of children is the second lowest (3.15). Sex differences exist on two of these variables: 7.7% of males and 12.2% of females expect early marriage and 1.0% of males and 3.5% of females expect early childbearing.

Students aspiring to scientific and mathematical fields of study tend to be white males from higher SES backgrounds. These students score relatively high on academic aptitude, performance, preparation, and commitment, perhaps because such emphases are important for entry into and successful completion of a Biology/Physical Science/Mathematics field. In spite of this emphasis on academics, their participation in academic extracurricular activities is only in the average range while their participation in sports activities is among the highest. Most interesting about these students is the low rank order of both the importance of work and money as well as of the six work values. The most important work value is performing interesting work, and even that percentage is only the fifth highest. Perhaps other factors motivate these students, such as the opportunity to perform scientific research. Finally, their commitment to their fields results in reduced commitments to early family formation.

Computer/Engineering/Architecture The percentages female and white are both the lowest among the fields (23.9% and 82.2% respectively); the percentage black (12.2%) is the highest. These students also have the second highest self-concept score (.17), and the third highest parental influence score (36.6%). But they are the least likely to have been read to before beginning school (52.1%).

Their aptitude and grade point average are both the third highest (55.76 and 3.20 respectively), and they are the second least likely to be absent (2.18). Given the demands of these fields, it is not surprising that the number of mathematics courses completed is the highest (5.46) and the number of science courses completed is the third highest (4.62). These students are also among the least likely to have taken history and social studies courses (4.71) and remedial mathematics (15.3%). Similarly, the mean number of advanced mathematics and science courses completed are the first and third highest (3.59 and 1.26 respectively). Interestingly, the number of vocational courses completed is also the third highest (3.68). These students rate the academic quality of their school as one of the highest (2.87), but also feel that schools should emphasize practical work experience to a greater degree (52.9%). Finally, these students are among the least likely to become involved in academic and service extracurricular activities (.84 and .22 respectively).

The percentage noting the importance of money is the second highest (34.0%), and the percentage noting the importance of good income for selecting an occupation is the second highest (49.7%). This value is the only work value on which these students score substantially above the other fields. The percentages for several other work values are substantially below most of the other fields: experience (21.2%), interesting work (87.0%), freedom to make decisions (55.2%), and working with people (53.3%). But these students are the second most likely to have full-time work experience (9.9%). Regarding expectations, these students are among the least likely to expect early marriage and childbearing (14.1% and 3.9% respectively), and their expected family size is among the lowest (3.17). Sex differences exist for two of these variables: 12.8% of males and 18.4% of females expect early marriage and 3.2% of males and 6.6% of females expect early childbearing.

In summary, students planning to study Computer/Engineering/Architecture are predominately males, and while most are white, blacks are more likely to select this field than any other field of study. The demands of these fields may warrant the exceptionally high self-concept characteristic of these students. These students score high on aptitude and academic performance and have concentrated their coursework in mathematics and science to a greater extent than have other students. While students pursuing other fields tend to study either academic or vocational courses, students in this category score high on both academic and vocational coursework, highlighting the dual academic and vocational nature of some of the occupations such students will attain. Similarly, they rate the academic quality of their school highly and also feel that schools should offer more practical work experience. In fact, these students are among the most likely to have full-time work experience. Only good income is a work value that is substantially more important for these students than for most other students, and money is an important general life value. These results parallel the relatively high income that these fields offer. Perhaps because these fields frequently involve post-graduate education, these students are unlikely to expect early family formation.

Agriculture/Home Economics/Vocational Students in this category score substantially lower than other students on most of the background variables. The percentage female is among the lowest (43.8%), as is the percentage black (8.0%). The SES score is the lowest (.01), as are locus of control (.03), educational aspirations (3.14),and mother's aspirations (3.31). Parental influence and "read to" are the second lowest (33.1% and 51.8% respectively).

Regarding school-related variables, these students have the lowest aptitude (50.13) and grade point average (2.87). They are the most likely of the fields to be in the vocational curriculum (30.2%), the second most likely to be in the general curriculum (37.0%), and the least likely to be in the academic curriculum (32.8%). They are the least likely to complete coursework in mathematics (3.87), English (5.86), history and social studies (4.65), and foreign languages (1.31); they have completed the second lowest number of science courses (3.43). Similarly, they are the most likely of the fields to have completed remedial mathematics and English (32.4% and 35.0% respectively), and the least likely to have completed advanced mathematics and science (2.09 and .51 respectively). As expected, the number of vocational courses completed and the percentage participating in co-op and work study programs are both the highest (4.86 and 21.1%).

The amount of homework completed is the lowest (3.38), and the percentage noting study habit difficulties and the absenteeism rate are both the third highest (16.7% and 2.37). These students rate the academic quality of their schools the lowest (2.74), and are the most likely to feel that schools should provide more vocational training and practical work experience (76.1% and 60.2%). They also are the most likely to note the provision of employment counseling (47.0%). Finally, their participation in academic and service extracurricular activities are the lowest (.78 and .18 respectively), and their participation in sports activities is among the lowest (.99).

Although the percentage noting the importance of work is high in absolute terms (89.1%), it is the second lowest among the fields. These students rate the importance of work experience higher than do the students in the other categories (37.1%); the percentage noting the importance of good income is the third highest (45.4%). Interesting work receives the lowest agreement (85.8%). These students are the most likely to have full-time work experience (13.4%). Regarding expectations, these students are the most likely to expect early marriage and childbearing (27.6% and 9.1% respectively). While 22.6% of males expect early marriage, 33.3% of females do so. Also, males expect 3.20 children and females expect 3.38 children.

In summary, those planning to study Agriculture/Home Economics/Vocational fields of study are primarily males from lower SES backgrounds. They also have the lowest educational aspirations and self-concept, and are the most externally oriented. Students in this category also score the lowest in academic aptitude, performance, preparation, and commitment, and stress vocational preparation. In addition to being uninvolved academically, these students are also uninvolved in extracurricular activities. In short, these students see school primarily as vocational training. Income and experience are the most important factors for selecting an occupation; interesting work is the least important. What seems more important to these students are marriage and having children.

Health The percentage female in this category is the highest (88.3%), and the percentage black is the second highest (11.6%). SES is the second lowest (.02), self-concept is the lowest (.00), and locus of control is among the lowest (.14). These students also have relatively low educational aspirations (3.81) and mother's educational aspirations (3.81). They also are quite unlikely to have received parental influence (33.9%), but are the most likely to have been read to before beginning school (63.1%).

The aptitude of these students is among the lowest (51.47), they are among the least likely to have taken history and social studies courses (4.70), and they are the second most likely to have been involved in co-op and work study programs (17.0%). They are among the most likely to believe that schools should emphasize vocational training and practical work experience to a greater extent (61.2% and 55.8% respectively), and second most likely to believe that schools should emphasize academics more (78.0%). While the amount of counselor influence is higher than most fields (13.5%), the amount of teacher influence is the lowest (12.8%). Finally, their participation in extracurricular activities is among the lowest for sports and service activities (.97 and .24 respectively).

The percentage noting the importance of work is the second highest (94.5%) while the percentage noting the importance of money is the lowest (20.9%). Compared to students pursuing other fields, job security is the most important for these students (69.2%), and interesting work and meeting people are the second most important (92.7% and 72.8% respectively). Job autonomy is the least important among the fields (52.8%). Perhaps because this category is dominated by females, these students are among the most likely to expect early marriage and childbearing (26.9% and 7.2% respectively), and expect the largest family size (3.42). While 8.6% of males expect early marriage, 28.5% of females do so. Also, males expect 3.07 children and females expect 3.46 children.

In summary, students planning on a Health field of study are predominately females of lower social class backgrounds, with a low self-concept and external locus of control. Blacks are particularly likely to select this category. Although the students have received some early socialization fostering education, their educational aspirations are relatively low. Few of the school-related variables emerged as significant. Although the aptitude of these students is quite low, they feel strongly that schools should stress academics more. Their interest in school is primarily vocational, and they seem to rely on counselors more than do students in the other fields. Although work is an important value, money is not. What matters for obtaining a job is job security, interesting work and meeting people. Many of these students plan on early family formation.

Summary Several conclusions emerge from these bivariate analyses of predictors of intended field of study. The Preprofessional values are more different from the remaining fields than are the values of any other field. That is, those planning a Preprofessional course of study are the most likely to score the highest or the lowest on all four categories of variable: background, school-related, work-related, and expectations. Perhaps this conclusion is due to the fact that the SES score is by far the highest of the categories. Many of the other variables may, in fact, be SES-related. The Agriculture/Home Economics/Vocational category contains values that are generally opposite of those in the Preprofessional category. The SES score for this category is clearly the lowest among the fields, again suggesting that many of these variable may be SES-related.

A second conclusion pertains to the school experience variables. Scores on these variables typically parallel the demands of the field. For example, future Preprofessional students stress academic preparation, Humanities/Arts students stress English, Business students de-emphasize academic coursework and emphasize vocational coursework, and students in the Biology/Physical Science/Mathematics and

Computer/Engineering/Architecture categories stress advanced preparation in mathematics and science. There are similar differentials regarding academic performance and commitment.

A third conclusion pertains to the work values. Very distinct constellations of variables emerge per field of study. For example, future Preprofessional students stress interesting work and freedom to make decisions, future Business students emphasize good income and job security, future Education students emphasize meeting and working with people, and work itself is relatively unimportant for those in the Biology/Physical Science/Mathematics category. Early family expectations are most characteristic of those fields dominated by women: Agriculture/Home Economics/Vocational, Health, and Education. Also, for those sex differences in family expectations which are significant, almost all show greater expectations among females.

Subtopic 2: Multivariate Analyses of Predictors

Subtopic 2 involves a multivariate analysis of the linkages between the independent variables and selecting each planned occupation and intended field of study. The standardized discriminant function coefficients are reported in Table 5.3 for planned occupation and Table 5.4 for intended field of study. Several other statistics are also reported: canonical correlation, eta-squared, significance level for Wilks' lambda, % classified correctly, and tau. These statistics were described in the last chapter as well as in Chapter 2 (Methods). The focus will again be on the standardized coefficients, and only coefficients greater than .100 will be analyzed.

Planned Occupation

Professional 2 Only eight of the 39 standardized coefficients for this category exceed .100. The canonical correlation for this function is .397, and the eta-squared is .158; this is the greatest amount of variance explained. The function is highly statistically significant, and 85.6% of the cases were classified correctly using the coefficients. A tau of .411 indicates that classification based on the function reduces the number of errors by about 41% over random assignments based on prior probabilities.

The largest coefficient is for educational aspirations (.549), which simply reflects the educational demands of a Professional 2 occupation. Since the period of education and training is so long, those who are the most committed to securing such education are the most likely to select this occupation. Next in importance are number of science and vocational courses (.234 and -.234 respectively); students who have completed more science courses and fewer vocational courses are distinctively more likely to select a Professional 2 occupation. Next in relative importance is aptitude (.112), although the coefficient is not substantively large. Perhaps some of the discriminatory power of aptitude is already reflected in some of the other variables. Next in importance are homework (.110) and the extent to which students feel their schools should emphasize vocational training more (-.105). Both these variable reflect a commitment to academic involvement, and hence these data underscore the relevance of academic commitment for selecting a Professional 2 occupation. The final variable with a standardized coefficient above .100 is the job value, freedom to make decisions (.101).

The results show that only a few variables make a substantive contribution to the discriminant function. Most critical is educational aspirations, which reflects the training demands of the occupations in this category. Several of the remaining substantively significant coefficients reflect the importance of academic commitment and training. The only one of the work-related variables that is important is job autonomy, which reflects the importance of autonomy for those planning to become lawyers and doctors.

Professional I Only six of the 39 standardized coefficients for this occupation have values above .100. The canonical correlation for this function is .276, and the eta-squared is .076. The function is highly statistically significant, and 69.2% of the cases are classified correctly using the coefficients. A tau of .252 indicates a 25% improvement over random assignment.

Educational aspirations is again the most substantive of the variables (.627), and full-time work status is the second largest coefficient (-.467). Next is sex (.222), followed by aptitude (.178). The final two variables are location in the academic curriculum (.144) and mother's educational aspirations (.118).

In summary, the data reflect a modest connection between this function and the select/not select grouping; only 7.6% of the variance is explained, although a modest improvement in correct classifications exists. The results underscore again the importance of educational aspirations, a prerequisite for successfully completing the education many of these occupations require. Similarly, those not working full-time are more likely to select this category, reflecting the greater academic commitment of these students. To a lesser extent, those aspiring to this category are more likely to be female and have a higher aptitude. They are more likely to be in the academic curriculum and to come from families emphasizing education. In short, the results profile someone who is committed to educational attainment, has higher than average aptitude and is located in the academic curriculum, and one who is not currently working full-time. Also, these students tend to be female, perhaps because this occupational category includes such occupations as registered nurse, librarian, and social worker.

Technical Sixteen of the 39 standardized coefficients in this category have values above .100. The canonical correlation for this function is .173, with an eta-squared of .030; this indicator of variance explained is one of the lowest. The function is highly statistically significant and correctly classifies 88.8% of the cases. A tau of .356 reflects an approximate 36% reduction in error by using the coefficients as opposed to random assignment.

The two key contributors to this discriminant function are sex and advanced mathematics training (-.432 and .418 respectively); mathematics coursework is also among the more substantive variables (.193). The two other important variables are vocational coursework and the extent to which respondents feel their school should emphasize vocational training more (.237 and .265 respectively), underscoring the importance of vocational preparation. Both SES and black make substantive contributions to this function (-.239 and .232 respectively); blacks and those of lower social class backgrounds are more likely to select a technical occupation. Participation in extracurricular activities has a negative effect (-.185 for sports and -.105 for academic activities). Regarding work values, job security and good income make positive contributions (.223 and .171 respectively), while job autonomy and working with people both have a negative impact (-.227 and -.144 respectively). Interestingly, those with full-time work experience are less likely to select this occupation (-.236). To a modest extent, finally, those expecting a large number of children and those expecting early childbearing are less likely to select this occupation (-.145 and -.116 respectively).

In summary, those planning on a technical occupation are most likely to be males and to have substantial mathematical training. This category includes such occupations as computer specialist and engineering technicians, which remain male-dominated. The results show that males select a male-dominated occupation. The role of mathematics training suggests that those planning on a technical occupation recognize the training demands of such occupations. The results also reflect the importance of vocational training. The results for SES suggest that this occupational category may play a role in upward mobility, and the results for black show high interest in this occupation among blacks. Aspirants to this category particularly value job security and good income, both generally available in these occupations. The fact that those with full-time work experience are somewhat less likely to select this category may reflect the training demands of this category; they simply do not have the time for such a work commitment. Those anticipating early family formation are also less likely to select this category, again perhaps due to postsecondary education requirements.

Teacher Sixteen of the 39 standardized coefficients exceed .100 in this category. The canonical correlation for this function is .225, with an eta-squared of .051. The function is highly statistically significant, and correctly classifies 92.4% of the cases. A tau of .359 indicates a substantial reduction in error by using the function as opposed to random assignment. While a number of variables emerge as substantively significant, both the correlation and the proportion of variance explained are low.

The two variables contributing most to this function are mother's educational aspirations and sex (.658 and .480 respectively); educational aspirations also has a positive coefficient (.176). Together, these results show that those most likely to desire a teaching career are women from families valuing educational achievement. Several other background variables are also relevant. Both SES and black have negative coefficients (-.108 and -.212 respectively), as do locus of control and aptitude (-.109 and -.223 respectively).

Three coursework variables are relevant, all with negative contributions: history and social studies (-.390), advanced mathematics (-.145), and vocational coursework (-.220). Future teachers are also more likely to be involved and committed to the school as reflected in the negative contribution of absenteeism (-.104) and the positive contribution of sports activities (.128). Both job security and good income as work values are negative (-.236 and -.294 respectively). Finally, those planning on a larger family are more likely to select this occupation (.165).

In summary, the two key factors are being female and educational aspirations (both personal and those held by mothers). The sex results show that females are much more likely to select teaching, still a female-dominated occupation, than are males. Perhaps because their planned occupation involves education, these students have relatively high educational aspirations and come from families holding high educational aspirations. Future teachers come from lower SES backgrounds, and blacks are less likely to select this occupation. Future teachers are also more externally oriented and have lower aptitude scores. Few coursework variables are relevant, and those which are have negative coefficients. In spite of lower aptitude and coursework preparation, however, these students are absent less often and participate more in sports activities. The negative effects of job security and good income may mean that they see tenure as easily obtained and that the widely publicized low salaries have already deterred those for whom a good income is important. The positive coefficient for family size expectations reflects congruence between the teacher and mother roles; teaching is relatively easy to enter and leave as children arrive, and the school calendar is similar for mother and children.

Manager/Proprietor Sixteen of the 39 standardized coefficients exceed .100. The canonical correlation with this function is .164, with an eta-squared of .027; this indicator of variance explained is one of the lowest. The function is highly statistically significant, and correctly classifies 86.3% of the cases. The tau of .378 indicates a substantial improvement over random assignment. However, both the correlation and variance explained are low, suggesting that other factors may be at work.

Sex and SES are the most salient (-.343 for sex and .516 for SES). Those aspiring to this occupation also have a more internal locus of control (.196) but lower aptitude (-.117) and grade point average (-.203). They are also somewhat more likely to be black (.140). While science coursework is negative (-.327), English coursework is positive (.118). Both participation in sports activities and full-time work experience have positive contributions (.134 and .165 respectively). The job values most predictive of selecting this occupation are freedom to make decisions (.256), good income (.216), working with people (.206) and experience (.151); interesting work is negative (-.101). Finally, those anticipating early marriage are somewhat less likely to select this category (-.109).

In summary, those planning on a Manager/Proprietor occupation are most likely to be male and from higher SES backgrounds. Persons selecting this occupation also tend to have lower academic aptitude and performance, and greater participation in sports activities. An emphasis on job autonomy, income, and working with people are especially likely to predispose people to select this occupation. They also believe in the importance of work experience and are quite likely to have had full-time work experience.

Craftsman/Operative Only four of the 39 standardized coefficients are larger than .100, although the canonical correlation is .438 and eta-squared is .192; this variance explained is the highest among the occupational categories. The function is highly statistically significant, and 87.6% of the cases are correctly classified. The tau of .389 indicates a substantial reduction in error by using the coefficients as opposed to random assignment.

Sex has the largest coefficient (-.663), highlighting the male-dominance of this category. The second highest is educational aspirations (-.474) and the third highest is mother's educational aspirations (-.110). The fourth variable is early marriage, which has a negative effect (-.104). These result suggest that males with low educational aspirations are the most likely to select a Craftsman/Operative occupation. Once these few variables are considered, the remaining variables are unimportant.

Clerical/Sales Ten of the 39 standardized coefficients in this category have values greater than .100. The canonical correlation is .394, with an eta-squared of .155; this variance explained is the third highest among the occupational categories. The function is highly statistically significant, and the coefficients classify correctly 85.5% of the cases. A tau of .381 reflects a substantial reduction in error by using the function over random assignment.

Sex again emerges as the single most important variable (.598), and educational aspirations emerges as the second most important variable (-.433). Mother's educational aspirations also enters (-.106). Together these results indicate that those aspiring to a Clerical/Sales occupation are predominantly females with lower educational aspirations. Aptitude has a negative effect (-.143), but grade point average has a positive effect (.116). While location in the academic curriculum has a negative effect (-.115), participation in vocational coursework has a positive effect (.206). Students selecting this occupational category are less likely to be absent (-.121) and are more likely to note the provision of employment counseling (.114). Finally, the only work value to emerge is autonomy, which has a negative effect (-.128).

In short, those most likely to aspire to a Clerical/Sales occupation are females with relatively low educational aspirations. Since most people in such occupations are female, the sex consonance hypothesis is again supported. These students also have relatively less aptitude but seem more committed to school, as seen in their higher grade point averages and lower absenteeism rates. Their vocational emphasis is seen in their vocational coursework and curriculum placement as well as in their experience with employment counseling. These students select occupations primarily on the basis of lack of job autonomy; most Clerical/Sales occupations offer limited autonomy.

Service Fifteen of the 39 variables have standardized coefficients greater than .100. The canonical correlation is .184. with an eta-squared of .033. The function is highly statistically significant, and correctly classifies 91.8% of the cases. The tau of .338 reflects a substantial reduction in error by using the function. However, the correlation and the eta-squared are both modest, and the number of variables contributing is fairly extensive. Hence, most variables do not play a major role, but together they enable more accurate prediction of those likely to select this category.

Sex again is the most salient variable (.378) and educational aspirations is again the second most salient variable (-.330). Mother's educational aspirations is again negative (-.170). Like the preceding occupation, the key predictors for the Service occupation are being female and having lower educational aspirations. Aspirants are less likely to be black (-.129), and more likely to have a lower grade point average (-.246). They are more likely to have taken remedial mathematics (.105) and less likely to have taken advanced mathematics (-.199) and vocational coursework (-.155). While they note the provision of educational counseling (.106), they are less likely to acknowledge the provision of employment counseling (-.137). They are somewhat more likely to become involved in sports activities (.155). Regarding work values, those stressing income and experience are less likely to select a Service occupation (-.213 and -.172 respectively), while those who wish to work with people are somewhat more likely to select this occupation (.104). Finally, those anticipating early marriage are somewhat more likely to select this occupation (.106).

In summary, those aspiring to a Service occupation are most likely to be female and have lower educational aspirations. Since most Service workers are female, the results again support the sex consonance hypothesis. They are also somewhat less likely to be black. Academic preparation is weak, while participation in sports is somewhat higher. Those selecting a Service occupation deemphasize income and experience and instead emphasize working with people. Many selecting this occupation also anticipate early marriage, characteristic of females with lower educational aspirations.

Farmer/Laborer Ten of the 39 standardized coefficients exceed .100. The canonical coefficient is .254, with an eta-squared of .065. The function is highly statistically significant, and allows accurate classification of 93.3% of the cases. A tau of .341 reflects a reduction of 34% in classification errors over random assignment. However, the canonical correlation and variance explained are both modest.

Once again, sex is the most salient discriminating variable (-.593), and again educational aspirations is the second most salient variable (-.422). Third is black (-.234), suggesting that blacks are less likely to select this occupational category. Autonomy has a positive effect (.201) and working with people has a negative effect (-.159). The relative insecurity of a Farmer/Laborer occupation is also reflected in the job security value, which is negative (-.121). Again consistent with the demands of the occupation, the importance of experience as a work value is reflected in its positive effect (.195). The importance of this experience is reflected in the positive contribution of the full-time work status variable (.101). Finally, participation in advanced mathematics has a negative effect (-.108) and participation in academic extracurricular activities has a positive effect (.112).

In summary, those aspiring to a Farmer/Laborer occupation are primarily males with low educational aspirations. They value work experience, and are more likely to select this occupation if they have such full-time work experience. The values characteristic of farmers appear in the results: job security and working with people are relatively unimportant while job autonomy is more important. Blacks are less likely to select this category, reflecting their greater interest in other occupations.

Military Eighteen of the 39 standardized coefficients exceed .100. The canonical correlation for this function is .152, with an eta-squared of .023; this indicator of variance explained is one of the lowest. The function is highly statistically significant, and allows accurate classification of 94.9% of the cases. The tau is a relatively modest .265, but still reflects a significant improvement over random assignment.

Once again, the two key variables are sex and educational aspirations (-.497 and -.462 respectively). Blacks and Hispanics are both somewhat more likely to select this occupational category (.383 and .155 respectively), as are those with a higher self-concept and aptitude (.114 and .251 respectively). These students also have taken more coursework in history and social studies as well as mathematics (.113 and .262 respectively), although they have completed fewer advanced mathematics courses (-.292). They have completed less homework (-.155) and are more likely to feel that their school should emphasize vocational training and academics to a greater extent (.109 and .142 respectively). They deemphasize the importance of job autonomy, good income, and work experience in selecting occupations (-.342, -.208, -.210 respectively), and emphasize job security (.218). Their deemphasis on work experience is also reflected in the fact that those less likely to have full-time work experience are more likely to select this category (-.125). Finally, perhaps due to the rigor and isolation of military training, they are less likely to anticipate early marriage (-.146).

In summary, those selecting a Military occupation are most likely to be male: with lower educational aspirations; military training may be seen by these men as an alternative to higher education. Minorities are somewhat more likely to be found in this category, an overrepresentation seen in actual military involvement as well. Those with a higher self-concept and greater aptitude are more likely to select this occupation, suggesting that the long-term trend of lower aptitude may be reversing. The positive effect for mathematics training but negative effect for advanced mathematics suggests that some mathematics training helps to complete military training but a great deal leads people to select other occupations that require more mathematics training. Although these students complete less homework, they support vocational training and academic emphasis. Those without full-time work experience and those who devalue experience as a work value are also more likely to select this occupation, as are those who devalue job autonomy and income. These latter two items are also consistent with the restrictions of a military occupation.

Housewife Ten of the 39 variables have standardized coefficients of .100 or greater. The canonical correlation is .293, with an eta-squared of .086. The function is highly statistically significant, and allows accurate classification of 93.8% of the cases. The relatively modest tau of .286 reflects an increase of 28% in the accuracy of prediction over random assignment.

Once again, the two key variable are sex and educational aspirations (.471 and -.453). Work is quite unimportant for these women (-.358), although job autonomy is an important work value (.130); those valuing job security and the opportunity to perform interesting work are somewhat less likely to select this category (-.111 and -.188 respectively). These students participate less in co-op and work-study programs (-.134). While those interested in becoming housewives are more likely to anticipate early marriage and childbearing (.275 and .113 respectively), they are somewhat less likely to expect a large family (-.232).

In summary, future housewives are most likely to be females with low educational aspirations. As such, they do not value work as a general life value, although they do note the importance of job autonomy and unimportance of job security and interesting work as work values. As expected, they anticipate early marriage and childraising.

Summary Several conclusions emerge from these multivariate analyses of predictors of planned occupation. First, there is considerable variation in the substantive importance of functions. The highest canonical correlation exists for Craftsman/Operative, with Professional 2 and Clerical/Sales placing a close second and third. The remainder of the canonical correlations are modest, with corresponding lower explained variance. The greatest variance explained is for the Craftsman/Operative occupation (19.2%); the variance explained for several of the other occupations is below five percent. While all the functions are statistically significant, these data suggest that factors other than those considered may be relevant for discriminating between those who do and do not select a given occupation.

The second conclusion pertains to the pervasive importance of both sex and educational aspirations. While the signs differ across the occupations, it is clear that those occupations that are traditionally female continue to be selected predominantly by females and those that are traditionally male continue to be selected predominantly by males. There is also a consistent relationship between the educational demands of an occupation and the educational aspirations of aspirants to such occupations.

Third, the coursework variables are typically consistent with the demands of the occupation. For example, those in the Professional 2 category are more likely to take science courses while those in the Clerical/Sales occupation are more likely to take vocational courses. Similarly, there is also a consistency between the work values selected and the typical demands of the occupation selected. For example, those selecting a Professional 2 occupation stress job autonomy while those selecting a Manager/ Proprietor occupation emphasize good income. Finally, those expecting early family formation tend to be women pursuing traditionally female-dominated occupations. In short, distinct similarities and differences exist across the results for the various occupations.

Intended Field of Study

Preprofessional Twelve of the 37 standardized coefficients exceed .100. The canonical correlation for this function is .292, with an eta-squared of .085. The function is highly statistically significant, and allows for accurate classification of 92.4% of the cases. The tau of .471 indicates a substantial improvement over random assignment.

The most salient discriminating variable is clearly educational aspirations (.435), followed by mother's educational aspirations (.266). These students also have a higher self-concept (.120), as well as a higher grade point average (.208). They have completed more science and foreign languages courses (.200 and .136 respectively), but fewer English, advanced mathematics, and vocational courses (-.131, -.147, and -.133 respectively). Regarding work values, they emphasize job security and autonomy (.170 and .215 respectively), but deemphasize working with people (-.161).

In summary, those planning on a Preprofessional course of study have high educational aspirations, self-concept and grade point average; all three are important for a field requiring extensive educational preparation. The positive effect of science courses coincides with the scientific nature of many of these occupations, and the positive effect of foreign languages reflects the prerequisites frequently mandated by colleges. Advanced mathematics, English, and vocational coursework is less prevalent among these students. While a Preprofessional course of study leads to occupations involving working with people, these students are actually less likely to value working with people. Instead they stress job security and autonomy. The motivation of these students therefore seems to be grounded more in intrinsic rewards than working with and helping others.

Humanities/Arts Nineteen of the 37 standardized coefficients are greater than .100. The canonical correlation for this function is .298, with a eta-squared of .089.

The function is highly statistically significant, and allows accurate classification of 85.5% of the cases. A tau of .400 reflects substantial improvement over random assignment.

The key discriminating variable is the job security work value, which is negative (-.410). Good income is also negative (-.127), while performing interesting work, job autonomy, and previous experience are positive (.182, .177 and .186 respectively). Aptitude is positive (.200), as are location in the academic curriculum (.187) and English and foreign languages coursework (.214 and .245 respectively). Coursework in science, advanced science, mathematics, advanced mathematics, and vocational preparation are all negative (-.296, -.175, -.269, -.316, and -.255 respectively). These students are less likely to participate in co-op and work-study programs (-.249) and are more likely to be influenced by teachers (.185) and to become involved in academic extracurricular activities (.188). Participation in sports activities is less characteristic of these students (-.168). Finally these students are less likely to anticipate early marriage (-.117).

In summary, students intending to study Humanities/Arts have greater aptitude and are more likely to be in the academic curriculum studying courses traditionally favored by Humanities/Arts students; they take fewer mathematics and science courses. They complete less vocational training and become involved in fewer sports activities. Their academic commitment is also seen in the sensitivity to teachers' influence and participation in academic extracurricular activities. These students desire an occupation with interesting work, autonomy, and which requires experience, but do not emphasize job security and good income. Perhaps because many of these students pursue advanced degrees, they are much less likely to anticipate early marriage.

Education Nineteen of the 37 standardized coefficients exceed .100. The canonical correlation is .252, with an eta-squared of .063. The function is highly statistically significant, and allows accurate classification of 93.0% of the cases. A tau of .460 reflects a 46% reduction in error by using the function as opposed to random assignment.

The most substantive discriminating variable is sex (.422), reflecting the greater tendency of women to select education. The second most substantive variable is participation in sports activities (.347), suggesting that the sports enthusiasts are somewhat more likely to plan an studying education. Educational aspirations plays an important role (.346), and mother's educational aspirations is also positive (.113). Both blacks and Hispanics are somewhat less likely to select this field (-.321 and -.134 respectively), as are people of higher SES (-.182). Future education students also have a lower aptitude (-.278), but are somewhat more likely to have taken science courses (.118). However, they are much less likely to have taken advanced mathematics (-.230), advanced science (-.156), foreign languages (-.113), vocational courses (-.195),and to have participated in co-op and work-study programs (-.141). However, they are more likely to be influenced by teachers (.198). Money is relatively unimportant to these students, both as a general life value (-.111) and as a work value (-.281). Job security is also a relatively unimportant work value (-.267). What is important is working with people (.131).

In summary, future Education students are most likely to be female and hold higher educational aspirations. Minorities are somewhat underrepresented, as are those from higher social class backgrounds. Teaching may still be an avenue for status mobility. The negative effect of aptitude supports previous research showing future Education students to have lower aptitude scores than students entering other fields. These students have taken less advanced mathematics and science, foreign languages and vocational coursework, although they have taken more science courses. They seem committed to school, as reflected in the importance of teacher influence and participation in sports activities. Perhaps because these students recognize the low pay and easy job security through tenure, money and job security are relatively unimportant; working with people is of primary importance.

Business Fourteen of the 37 standardized coefficients exceed .100. The canonical correlation is .299, with an eta-squared of .089. This function is highly statistically significant, and allows accurate classification of 76.5% of the cases. A tau of .533 reflects greater than 50% reduction in error by using the function.

Unlike many other fields, most important discriminating variables are coursework variables. The first and fourth most discriminating variables are advanced and regular science coursework (-.440 and -.348 respectively). The second and third most salient are vocational and advanced mathematics coursework (.400 and .353). Remedial English is negative (-.114). Membership in the academic curriculum is a negative predictor (-.115), although grade point average is positive (.127). SES is also positive (.120), but educational aspirations is negative (-.190). These students are also less likely to be influenced by teachers (-.141). Money is an important general value (.128) and also is a core work value (.238). Working with people is also an important work value (.236), but those desiring interesting work are less likely to select Business (-.136).

In summary, the Business field is distinguished by the importance of several coursework variables. Those aspiring to a Business field on the one hand have little scientific training but have taken a considerable number of vocational and advanced mathematics courses. Perhaps the vocational courses in Business fields require advanced mathematical training. Also, few Business occupations require scientific knowledge. Future Business students are not highly academically oriented, as reflected by the negative contributions of educational aspirations, teacher influence, and academic curriculum membership. However, grade point average does have a positive effect, perhaps reflecting the competitiveness in entry into a Business field of study in college. Money plays a central role in the lives of these people, both as a general value and as a work value. They also value the opportunity to work with people.

Social Science Fourteen of the 37 standardized coefficients exceed .100. The canonical correlation is .222, with an eta-squared of .049. The function is highly statistically significant, and affords accurate classification of 92.3% of the cases. A tau of .464 indicates a substantial reduction in error by using the discriminant function coefficients over random assignment.

Like many other fields, sex is the single most important discriminating variable (.444), reflecting the female domination of this field. Second in importance is the number of history and social studies courses completed (.349). Participation in advanced mathematics, advanced science, and vocational courses all are negative predictors (-.170, -.282, -.315 respectively). However, aptitude, educational aspirations, and mother's educational aspirations are all positive predictors (.241, .325, and .211 respectively). These students are more likely to be in the academic curriculum (.189), but have lower grade point averages (-.245). They are also slightly more likely to be Hispanic (.109). Although none of the work values are positively related to selecting this field, negative predictors include job security (-.123), good income (-.199), and experience (-.170).

In summary, the social sciences are still selected primarily by females and by students who have taken a considerable amount of history and social studies while in high school. The former finding again supports the sex consonance hypothesis, while the latter finding suggests a continuity effect regarding students' interest in a given field. These students tend to be academically oriented, as reflected in their aspirations and curriculum orientation, although their performance and aptitude are both somewhat lower. Consistent with many of the values promulgated in female-dominated occupations, income and experience are devalued, as is job security.

Biology/Physical Science/Mathematics Seventeen of the 37 standardized coefficients are greater than .100. The canonical correlation for this function is .225, and eta-squared is .050. The function is highly statistically significant, and affords accurate classification of 94.8% of the cases. A tau of .461 reflects a substantial improvement over random assignment.

The two key discriminating variables are coursework in science and advanced science (.364 and .366 respectively). History and social studies as well as vocational coursework have slight negative discriminating effect (-.114 and -.272 respectively). Participation in co-op and work-study programs is positive (.113) and advanced science is negative (-.105). These students are likely to be male (-.230) and to have higher aptitude (.107), although they are less likely to be in the academic curriculum (-.122). Both money and work are somewhat less important as life values (-.116 and -.187 respectively), as is full-time work experience (-.132). Working with people is a negative predictor (-.165), while job autonomy and interesting work are more important work values (.104 and .106 respectively). Finally, these students are somewhat more likely to anticipate early marriage but expect a smaller family size (.131 and -.124 respectively).

In summary, those planning on a Biology/Physical Science/Mathematics field of study are characterized primarily by their science training and as being male. Scientific training is central to these fields, and these fields continue to be dominated by men. They deemphasize history and social studies as well as vocational coursework. These students are of higher academic aptitude, although they are somewhat less likely to be in the academic curriculum. They tend to place less value on money and work but stress interesting work and job autonomy in selecting an occupation. They anticipate early marriage but smaller families.

Computer/Engineering/Architecture Eleven of the 37 standardized coefficients exceed .100. The canonical correlation is .412, with an eta-squared of .170. The function is highly statistically significant and allows for accurate classification of 81.7% of the cases. A tau of .327 reflects about a 33% reduction in error by using the function as opposed to random assignment.

The most salient discriminating variable is sex (-.547), and the second most discriminating variable is advanced science coursework (.401). Mathematics and advanced mathematics are also important (.312 and .259 respectively), although regular science coursework is negative (-.145). Of lesser substantive importance are the positive effect of being black (.168), the positive effect of vocational coursework (.179), an emphasis on job security and good income as work values (.149 and .157 respectively), and a deemphasis on job autonomy and working with people (-.151 and -.174).

In summary, those who select Computer/Engineering/Architecture as a field are most likely to be males with heavy preparation in advanced science and mathematics. The predominance of males is consistent with the traditional male stereotype for these fields of study, and the emphasis on science and mathematics is consistent with the demands of these fields of study. Blacks are somewhat more likely to select this field. What motivates these students is primarily security and income, and, in fact, those emphasizing job autonomy and working with people are less likely to select this field. These values parallel the nature of these fields since the skills obtained generate both security and income, and computer specialists and engineers do not work with people a great deal.

Agriculture/Home Economics/Vocational Nine of the 37 standardized coefficients exceed .100. The canonical correlation for this function is .317, with an eta-squared of .100. This function is highly statistically significant, and it accurately classifies 93.2% of the cases. A tau of .577 reflects more than 50% reduction in classification errors.

The best discriminating variables are educational aspirations and mother's educational aspirations (-.546 and -.265 respectively), highlighting the unimportance of education for these students. Overall, males are somewhat more likely to select this category (-.243). Participation in mathematics courses has a negative effect (-.167), and participation in remedial English has a positive effect (.109). Vocational coursework is also positive (.157). Consistent with the emphasis on vocational preparation, these students are more likely to have full-time work experience (.133). Finally, what matters to these students are job autonomy and experience (.124 and .140 respectively).

In summary, the major feature of these students is their deemphasis on educational attainment. As expected, they stress vocational preparation over academic preparation, and are more likely to have the work experience consistent with the demands of many of these occupations. Their emphasis on work experience is also consistent with these other results, and the positive effect of job autonomy may reflect one of the typical values of future farmers.

Health Fourteen of the 37 standardized coefficients exceed .100. The canonical correlation for this function is .320, with an eta-squared of .102. The function is highly statistically significant, and allows accurate classification of 90.4% of the cases. A tau of .458 reflects a substantial improvement over random assignment.

Sex again is the key discriminating variable (.673), and number of science courses completed is the second most discriminating (.572); participation in advanced science course is also relevant (.168). However, those selecting a Health field come from somewhat lower social class backgrounds (-.149) and have lower aptitude (-.226). They also have a lower grade point average (-.108). In addition to their science coursework, they are more likely to have participated in co-op and work-study programs (.107), but less likely to have completed vocational courses (-.103). Teacher influence has a negative effect (-.156); as does mother's educational aspirations (-.179). Work is an important life value for these students (.108), and they tend to emphasize job security (.260) and working with people (.136). They clearly deemphasize job autonomy (-.285). Finally, they are more likely to expect a larger family (.131).

In summary, this field is dominated by women and shares some of the features of other fields dominated by women, such as the importance of working with people and job security and the lesser importance of job autonomy. Women entering this field tend to come from lower social class backgrounds and have lower aptitude; perhaps Health fields are also seen as enhancing status mobility. However, given the clear demands of this field of study, they are very likely to have completed both basic and advanced science course work. The positive contribution of participation in co-op and work-study programs may reflect the emphasis on early experience found in this field. However, these students have a lower grade point average and are less subject to teacher influence, reflecting a reduced commitment to school as an academic institution. Work is important to the students, particularly jobs having security and the opportunity to work with people. Perhaps because they are predominately female, the expected number of children is a positive predictor.

Summary Several conclusions emerge from these multivariate analyses of predictors of selecting field of study. First, the canonical correlations are quite modest, with corresponding modest amounts of variance explained. The largest canonical correlation is .412 for the Computer/Engineering/Architecture category, with a variance explained of 17.0%. The lowest canonical correlation is .222 for Social Science, with a variance explained of 4.9%. Hence, selecting each of these fields of study is in large part determined by factors other than those examined.

Second, in spite of these relatively low canonical correlations and variances explained, the results for the percentage correctly classified and the tau's reflects a fairly high level of accuracy in classifying the cases correctly. The highest percentage classified correctly is for the Biology/Physical Science/Mathematics category, with 94.8% correctly classified; the lowest percentage correctly classified is for the Business category, with 76.5% correctly classified. Similarly, the highest tau is for the Agriculture/Home Economics/Vocational category (.577), and the lowest tau is for the

Computer/Engineering/Architecture category (.327). Hence, the variables examined clearly contribute to an improvement in correct classification over simple random assignment based on prior probabilities.

Third, some variables have greater discriminatory power than do other variables. These frequently appearing variables exist in the background variables, the school-related variables, and the work-related variables; few exist in the family expectations variables. Among the background variables, sex, aptitude, and educational aspirations are clearly the most relevant. These results suggest that students still select fields of study based on traditional sex-role stereotypes, that they select fields of study based on their academic requirements, and that they select fields consonant with their educational aspirations. The school-related variables most relevant are regular and advanced science coursework and vocational coursework. Appearing somewhat less frequently are grade point average and location in the academic curriculum, as well as participation in co-op and work-study programs and teacher influence. These results suggest that students select fields of study based on their academic preparation, or perhaps that they plan their high school programs in concert with their intended field of study. These results also show that academic performance influences intended field of study, and that teachers have a distinct positive or negative effect in several categories.

The work values are also important, especially job security, job autonomy, working with people, and good income. Students clearly select fields of study that generally match their work values. For example, future Health students particularly value job security, Preprofessional students particularly value job autonomy, and future Business students particularly value working with people and good income. Finally, the family expectation variables are relatively unimportant, suggesting that family expectations do not figure prominently in students' choice of field.

This chapter has examined the predictors of adolescents' occupational and field of study choices in some detail. The final chapter summarizes the entire study and reviews the policy implications of the study.

CHAPTER 6

Summary and Policy Implications

It is difficult to summarize several hundred pages of text, over thirty tables, and hundreds of coefficients in a relatively brief concluding chapter. Hence, this chapter will of necessity be somewhat cursory. For each of the three research issues, the results are summarized and the theoretical and policy implications are discussed. Special attention will be paid to the Teacher/Education categories.

Background

The study addresses a key issue in the youth-to-adulthood transition: selecting and attaining an occupation. Field of study selection and attainment are examined within this occupational framework. This overall focus on career development takes place in the context of three specific research issues. The first research issue examines the changes which have occurred between 1972 and 1980 in seniors' occupational aspirations and intended field of study. Changes in preferences, as well as in the variables associated with these preferences, are reviewed. The second research issue assesses how successfully seniors have attained their occupational and field of study plans. The success rates themselves are compared, and the linkages between a variety of independent variables and success rates within each category are explored. The third research issue examines in-depth how a variety of factors are linked with selecting each occupation and field of study in the 1980 cohort.

The results have policy implications for educators, legislators, and federal officials concerned with educational issues. The results will provide college officials with information on the changing occupational and field of study selections of entering freshman, as well as changes in the characteristics of these students. The results will assist federal officials in assessing and developing manpower needs as well as assessing the congruency between aspirations and the occupational opportunity structure. Policy implications are also implicit in the results linking various independent variables to successful pursuit. Educators and other officials will be in a better position to enhance the success rates in selected fields and occupations. In short, the results are policy relevant for multiple audiences, including educators and governmental officials.

The results also have a bearing on various theories and substantive issues found in the literature. Although no comprehensive theory exists for explaining career development, major theoretical emphases in the literature include status attainment models, occupational decision making theory, and opportunity structure theory. The results for the successful pursuit analyses contribute to our understanding of the status attainment process and identify some of the key predictors of successful pursuit. The results also show which factors are the most relevant for occupational decision making, thereby contributing to our understanding of that process. Regarding opportunity structure theory, the results for the successful pursuit analyses help determine if the thesis of opportunity structure theorists is correct. In short, the study contributes to theory building in this area by providing evidence relevant for each of the three major theoretical emphases.

Few researchers have studied the selection of specific occupations and fields of study. As a result, the study sheds considerable light on the selection of specific occupations and fields, thereby contributing to our knowledge of the career development among young adults. The results also help assess the effects of several variables noted in the literature, such as SES, race, sex, aptitude, and various other personal and school variables. The net result is a comprehensive analysis of the career development of both males and females in two of the largest studies of adolescents ever completed.

The two data sets used in this study are the National Longitudinal Study (1972) and High School & Beyond (1980). The NLS study involved over 22,000 seniors and the HS&B study involved over 28,000 seniors. Weights were employed in all the analyses to more accurately represent the larger populations.

Since the two data sets were combined into one file for the first research issue, several comparability of measures issues had to be addressed, particularly regarding the planned occupation and field of study variables. Both of these key dependent variables were collapsed to reflect issues of policy relevance as well as statistical considerations. The occupational categories analyzed include: Professional 2 (advanced degree), Professional 1, Technical, Teacher, Manager/Proprietor, Craftsman/Operative, Clerical/Sales, Service, Farmer/Laborer, Military, and Housewife. The fields of study examined include: Preprofessional, Humanities/Arts, Education, Business, Social Science, Biology/Physical Science/Mathematics, Computer/Engineering/Architecture, Agriculture/Home Economics/Vocational, and Health. Successful pursuit of occupation was defined as a match between the occupation codes of planned occupation and the jobs held between 1972 and 1979; a match for any year resulted in a successful pursuit designation. In order to give students the maximum time to attain a degree, successful pursuit of field of study was defined as a match between the intended field of study and the field of study in which a degree was actually attained; the last two follow-ups were used for determining degree completion.

A variety of analytical techniques and statistics were used, and these were described in Chapter 2 (Methods). Several univariate analyses simply involved percentage distributions. Bivariate analyses centered on comparisons of means and percentages, using inferential statistics. Multivariate analyses were performed with multiple regression analysis and discriminate function analysis; both techniques allow a determination of the unique effect of each variable. Both data sets were combined in Research Issue 1 and cohort was added as a variable; several interaction terms were also included.

Research Issue 1: Changes Between 1972 and 1980

Subtopic 1: Changes in Occupation and Field Preferences

Summary The first subtopic compares the percentages of seniors selecting each occupation and field of study across the two cohorts. The results for both occupation and field show both substantial and minimal amounts of change. The most substantial change in occupational preferences was the dramatic decline in the Teacher category, which dropped by more than half. The more than doubling of interest in the Manager/Proprietor was the second greatest change. The changes for the other occupational categories were substantially less pronounced. The category attracting over one-fourth of seniors' choices is the Professional 1 category; the Professional 2 category also continues to attract more than 10% of the selections. These data show that seniors remain very interested in a professional position, with over one-third selecting one of the professional categories. In addition to the Manager/Proprietor category, which now attracts about 11% of the preferences, the only other categories to attract more than 10% include the Clerical/Sales and the Craftsman/Operative categories.

The results reflect several changes in the larger social and economic structure of the 1970-1980 decade. For example, the substantial drop in interest in teaching undoubtedly reflects a reduced demand for and status of teachers, as well as the substantial decline in their real salaries. The increased interest in Manager/Proprietor occupations and the decreased interest in Clerical/Sales occupations may reflect the greater income and status of the former category as well as the movement of women from Clerical/Sales positions to Manager/Proprietor positions.

The results also differ dramatically from the actual distribution in the labor force. This discrepancy is most noticeable in the Professional categories since many plan on professional occupations but relatively few complete the training required and actually enter such occupations. About half of the seniors plan on attaining a professional or technical occupation but only slightly more than 10% of the labor force occupies such positions. Conversely, only about 15% of the seniors plan to enter a Clerical/Sales occupation, while about one-fourth of the labor force occupies such positions. A similar situation exists for the Craftsman/Operative occupations. Also, the percentage of the labor force in Service occupations is about twice the percentage planning on such occupations. A closer match exists for the remaining categories. These data reflect a very noticeable "status stretch," with the proportion selecting upper status occupations much higher than the proportions actually in such occupations.

Several changes also occurred in intended field of study. Several categories accounted for most of the changes. Those interested in Computer/Engineering/Architecture more than doubled, as did those interested in Business. Those interested in Education declined by half. Modest declines occurred in the Professional and Social Science categories. The changes in the remaining categories were less substantial. These results parallel those for planned occupation. Noticeable increases occurred in the technology and engineering fields as well as in Business, and a substantial decline occurred in Education. These changes also reflect some of the changes in the American social and economic system in the last decade.

Theoretical Relevance The disparity between occupational choice and distribution in the labor force provides some support for the opportunity structure theory. These theorists argue that adolescents know very little about the occupational structure and have considerable difficulty planning and executing their own occupational careers. The results presented above clearly support this conclusion, with most seniors planning on a higher status occupation than they will likely attain. This concept of "status stretch" undoubtedly affects adolescents' views of themselves, their socialization (including schooling), and the occupational structure. Unfortunately, few researchers have examined the causes and consequences of this phenomena. Undoubtedly a variety of personal, background, and school experience variables enhance the degree of stretch which occurs.

The results for both occupation and field again reflect the reciprocal relationship between societal events and individual attitudes and behaviors. The occupational and field plans of adolescents continue to be influenced by such events, particularly the altered economic climate, the differential opportunities in various areas, and the expansion of the women's movement. Finally, the results presented here parallel many of the trends documented by other researchers (Herzog, 1982; Lyson and Brown, 1982; Rumberger, 1982; Shapiro and Crowley, 1982).

Policy Relevance The results have several policy implications. At the federal level, the results should be examined in the context of projected shortages and surpluses in various occupational categories. For example, recent projections forecast a teacher shortage beginning in the mid to late 1980's (National Center for Education Statistics, 1982); with the substantial drop in interest in the Teacher/Education categories, a rather severe teacher shortage may develop. It is possible that the dramatic increase in those pursuing a Business occupation may result in a surplus of such workers. The clear imbalance between interest in a professional occupation and availability of such positions is already seen in the growing oversupply of lawyers. Perhaps federal policies and programs should be developed to help rectify the projected imbalances and to help adolescents make career decisions that are more realistic.

The changes in intended field of study will be of interest to college officials as they continue to modify their curricula as well as the requirements for entry into their various programs. Colleges and universities have already taken steps to reduce or eliminate various teacher training programs, and have also worked diligently at increasing business faculty. Such officials may also be interested to learn that interest in Health fields has declined slightly and that, contrary to popular belief, interest in the Humanities/Arts has remained fairly stable. The decline in the Biology/Physical Science/Mathematics category may be of concern to both college and federal officials as both begin to respond to growing national concern with the shortage of those interested in these areas. Responses may include programs at both the federal and local institution level designed to attract and retain people in these fields.

The discrepancy between seniors' plans and the actual distribution in the labor force also merits policy attention. The results suggest that junior and senior high school personnel focus more on the occupational decision making process as well as the occupational structure. Perhaps a course on "career development" could be instituted, and perhaps repeated in the junior and senior high schools. Also, more attention should be paid to the amount and quality of counseling services. Mandating more frequent and longer sessions with counselors may also help alleviate the discrepancy. Efforts designed to increase the realism of adolescents' occupational choices should yield benefits at both the individual and societal levels.

Subtopic 2: Bivariate Analyses

Summary This subtopic involved bivariate analyses of the relationships between several independent variables and selecting each occupation and field category. Several conclusions emerged in the analyses for occupation. Most notable is the consistency of some of the changes. Interest among Hispanics increased in 10 of the

11 occupations, and interest among blacks increased in seven occupations. The results show a broadening of minority interest in most occupations. Interest shown by women increased for all the higher status occupations, reflecting the expansion of occupational opportunities for women.

Seniors in all the occupational categories report the greater importance of money; all 11 categories also reflect increased employment counseling. The stagnating economy and difficulty in securing employment may be responsible for both of these trends. Another noticeable trend has been the consistent drop in parental influence; such influence dropped in all occupational categories. To some extent this drop has been counterbalanced by the increased influence of school personnel. However, parents still have far more influence than do school personnel. A final trend pertains to the academic experiences of adolescents. Academic curriculum representation dropped in over half the occupations, with a corresponding increase in vocational and general curricula representation. Foreign languages coursework dropped in all categories, and science coursework dropped in half. Aptitude dropped in four categories but grades increased in five. The results show a definite broadening in the curricular background of seniors, as well as a decline in academic abilities and preparation. These changes may be a product of a deemphasis on academic preparation and an emphasis on electives and minimal requirements over the last decade.

The most noticeable trend in the Teacher category was a decline in academic capabilities and preparation. The decline in aptitude was the most substantial decline among the occupations. Future teachers were the only ones to have completed fewer mathematics courses, and the declines in science and foreign languages coursework were the greatest among the occupations. A decline also occurred for those in the academic curriculum. In addition, the declines in self-concept and locus of control were the most substantial among the occupations, underscoring the lower self-concept and greater external orientation of future teachers. Future teachers in 1980 appear considerably less qualified and less positively oriented than in 1972.

Several conclusions also emerged in the analyses of field of study. One is the substantially increased interest shown by women in most of the fields. Minority interest also increased. Both of these changes reflect the expanded opportunities in most fields for minorities and women. The economic and social events of the decade again appear. Money carried more importance in all nine fields, and increased employment counseling was reported in all nine fields. Increased importance of work success appeared in seven fields. These results document the heightened sensitivity to economic and employment issues.

Declining academic aptitude and preparation are again documented. Aptitude scores dropped in six of the fields, most noticeably in Education. The percentage in the academic curriculum dropped in eight fields, with corresponding increases in the general and vocational curricula. Foreign languages coursework was down in all nine fields. Parental influence declined in most of the fields, and teachers' influence was up in most of the fields. A slight shift towards school personnel seems to have occurred in the balance of influence, although parents still retain most of the influence. The results parallel those for the occupation analyses in that they seem to be linked to the major events of the decade: expansion of opportunities for women and minorities, declining academic aptitude and commitment, declining influence of the family, and economic and labor difficulties.

The decline in aptitude was most pronounced among those interested in Education, as was the decline in the percentage in the academic curriculum. Like most other students, Education students increasingly value money; this increase may be a product of consistent declines in teachers' salaries. Although still high, parental influence has declined some and employment counseling has increased.

Theoretical Relevance The major contribution of these results to the literature lies in the greater understanding the data provide regarding the changes in the characteristics of students pursuing each occupation and field. Seldom have specific fields and occupations been examined over time for changes in a variety of predictor variables. As a result, both the similarities and the differences in the changes in the variables across the occupational and field categories have been outlined.

Second, the results again confirm the close linkage between societal events and individual attitudes and behaviors. Many of the similarities in the changes reflect several major developments in our society: the expansion of opportunities for women and minorities, declining academic aptitude and commitment, declining influence of the family, and economic and labor difficulties. Both the changes in the preferences for individual occupations and fields as well as changes in the predictor variables within each of these categories again highlight the reciprocal relationship between societal events and individual behavior.

Third, the results confirm the identification of salient variables in the literature. While SES did not have the widespread effect noted in the literature, the results for race and sex and aptitude, as well as for various other personal variables, substantiate the emphasis found in the literature on these variables.

Policy Relevance The results are policy relevant for officials at various levels. Federal officials, particularly those in the Department of Education, will be concerned with the sharp decline in aptitude and academic preparation of future teachers and education students. In both the Teacher and Education categories, the decline in aptitude was by far the most substantial. The results may encourage federal as well as state officials to respond by encouraging college officials to tighten both the entry and exit requirements. Regarding the decline in academic preparation, the results may encourage officials to substantially increase the academic preparation of future teachers. The noticeable declines in self-concept and locus of control may also draw attention to the selection procedures in schools of education. The increased concern shown by these students for money may encourage officials at all levels to support substantial salary increases for teachers, particularly given the steady decline in their real incomes.

Academic aptitude and training declined in fields and occupations other than Teacher/Education. This general trend should be of concern to educational as well as legislative officials at all levels, particularly given the poor performance of American youth in international comparisons. This issue of academic competence and training also emerged as a key factor in the report of the National Commission on Excellence in Education. The results presented in this study document the decline and show how it is more evident in some fields and occupations than others.

Adolescents across fields and occupations noted the increase in employment counseling offered by their high schools. Perhaps such counseling is increasingly important given the increasing intricacies of selecting an occupation and a college. Perhaps the time has come for some formalized assessment of the quality and quantity of these services, as well as an examination of other strategies for providing adolescents with occupational information. The need for such redevelopment was also apparent in the results of the first subtopic, which highlighted the disparity between adolescents' selections and labor force distributions.

Subtopic Three: Multivariate Analyses

Summary Several conclusions emerged in the multivariate analyses of factors predicting selection of occupation. First, the amount of variance explained for the occupations is relatively low; the highest is about 16%. Hence, the results indicate clearly that selection of a given occupation is largely a product of factors that were not include in the equations. Such factors might include actual experience in an occupation, occupation held by a parent or a close friend, occupational knowledge, other values and beliefs, and psychological traits.

Second, the results document the importance of a few variables. Sex is the most salient variable, using the beta as an indicator. The results show that most occupations remain sex-role stereotyped in terms of student preference. Aptitude has modest betas in at least half of the occupations, suggesting a connection with occupational selection. Race and cohort differences also emerge in about half of the occupations, as do curriculum and SES. The variables with the greatest effects across the occupations are demographic variables, variables over which individuals and school personnel have little influence. These results also suggest that occupational decision making is largely a product of the early socialization experienced as male or female, black or white, or from high or low socioeconomic status backgrounds.

Third, the interaction effects were not substantial. The purpose in combining the two cohorts was to examine the interaction effects for several variables with cohort. Few of the interaction terms were substantively significant. Finally, many of the other variables failed to attain substantive significance. For example, self-concept had little consistent effect. Few of the coursework variables emerged as important. Neither of the two types of counseling services variables were important. The effects of these variables may have been transmitted through variables with substantively significant effects such as sex, race, aptitude, and year.

Selecting a Teacher occupation seems to be primarily a product of sex; the field remains dominated by women. The interaction effects reflect a decline in the sex differences between the two cohorts, a decline in the difference between blacks and whites, and a decline in the role of aptitude. The relatively strong beta for year reflects the substantial drop in interest in this occupation. The betas for curriculum and teachers' influence are also modest, showing that academic students are slightly more likely to select a Teacher occupation and that a modeling effect may be occurring via teachers' influence.

Several conclusions emerge from the multivariate analyses of predictors of field of study as well. Again, the levels of variance explained are low, with the highest being about 12%. Again, factors other than those examined seem relevant for selecting a field of study, such as fields pursued by siblings in college, type of college attended, intended fields of closest friends, stage of occupational decision making, and various psychological traits.

As with occupation, some variables are clearly more relevant than others. Sex and aptitude are again the most salient variables, underscoring the sex role stereotypes that continue to dominate the fields and also underscoring the aptitude requirements for several of the fields. Black also is a salient variable, echoing the results for the occupational analysis. Three of the most relevant variables--sex, aptitude and black--are demographic and background variables, variables over which school personnel have no control. The relative importance of mathematics and science coursework underscores the differential importance of both types of coursework for field of study selection. Fields have very different coursework preparation requirements, which may be reflected in these data. The relative importance of year simply reflects some of the shifts in interest among seniors noted above. While the results for the year-aptitude interaction effect were negligible, several of the year-sex interaction coefficients were substantively important. These results reflect both the expansion and contraction of the sex differences between 1972 and 1980. The results show a decline in interest among females in such fields as Education and Health as well as increased interest in such fields as Business and Computer/Engineering/Architecture. The results also highlight the lack of importance of several variables. For example, SES and self-concept, as well as grades, have negligible effects. Perhaps their effects, particularly for SES, are carried through such variables as curriculum, aptitude, and coursework.

Sex is the most substantively significant variable for selecting Education, with the field continuing to be dominated by women. The substantively significant effect for year simply reflects a sharp decline in interest in Education. The results also show a negative effect for aptitude, less interest among blacks, and declining sex differences.

Theoretical and Policy Relevance The theoretical and policy relevance of these results are very similar to the bivariate results. Regarding theoretical relevance, the results enable a better understanding of the factors leading people to select a given occupation or field, and the multivariate analyses enable a more clear specification of the unique effect of each factor. The results are also theoretically relevant in terms of their linkages with societal developments, and the results again confirm the identification of salient variables in the literature.

Regarding policy relevance, the results again highlight the characteristics of those aspiring to the Teacher and Education categories. The finding that teachers' influence is a major factor in selecting both the Teacher and the Education categories underscores the importance of hiring only the best teachers. Both teachers and those planning to become teachers are often described as only minimally competent, of only average aptitude, and possessing at best an average level of commitment ("Why Teachers Fail," 1984). If the modeling effect is indeed strong, teachers may be instrumental in attracting to the field those who resemble themselves. The policy implication is clear: improve the characteristics of the teachers playing a modeling role. Several of the other conclusions parallel those noted in the bivariate analyses, particularly regarding the relatively low level of aptitude. Specific profiles of those pursuing other occupations and fields may be of interest to educators and policy analysts.

Research Issue 2: Successful Pursuit of Occupation and Field of Study

Subtopic 1: Success Rates

Summary The first subtopic presents the success rates for the occupation and field categories. The highest success rates for occupation are for the Craftsman/Operative and the Clerical/Sales categories (over 80%). Slightly more than half of those in the Military, Farmer/Laborer, and Service categories were successful. Almost 40% of Manager/Proprietor selectors were successful, and almost 30% of the Teacher, Professional 1, and Technical categories were successful. Finally, only about 20% of those planning on a Professional 2 occupation were successful. The results suggest that the less difficult the entry into an occupation and the more widespread the availability of jobs, the higher the success rate. Hence the high success rate for the Craftsman/Operative and Clerical/Sales categories and the low success rates in the Professional and Technical occupations. The results also parallel those noted above regarding the discrepancy between planned occupation and labor force distribution: those in the higher status occupations experienced lower success rates. They apparently found it necessary to redefine their occupational goals, usually downward in status.

Success rates were much lower for fields. About one-third of those intending to study Education, Humanities/Arts, Health, and Business were successful. About one-fifth to one-fourth of those intending to study Computer/ Engineering/ Architecture, Social Science, Agriculture/Home Economics/Vocational, and Biology/Physical Science/Mathematics were successful. Finally, less than one-fifth of those in the Preprofessional category were successful. The relatively low value of the Preprofessional field again shows the popularity of this field as a choice but the difficulty in pursuing this category. The data suggest that those fields requiring professional preparation, such as Education, Business, and Health, have somewhat higher success rates than do other fields. In short, the data for both occupation and field of study show wide variability in success rates.

Theoretical Relevance. The results for both occupation and field of study do not provide clear support for either occupational choice theory or opportunity structure theory. Perhaps both theories are relevant. The "high success" occupations and fields may be those where rational decision making prevails, while the "low success" occupations and fields may be those where more choices need to be made at more junctures, each with its own set of costs and opportunities. An alternative explanation may lie simply in the status of the choice. Higher status categories attract more choices but have lower percentages in the labor force. Hence more respondents selecting these categories will be defined as unsuccessful. In short, more people select high and move down than select low and move up.

Policy Relevance. The relatively low success rates of some occupations and fields may be of interest to some federal officials concerned with future labor force distribution. For example, teacher shortages are predicted for the latter part of this decade. The percentage interested in a teaching occupation has dropped substantially, and fewer than one-third of those were successful in pursuing a teaching occupation. Together these data forecast a rather acute shortage of teachers near the end of the decade. Similarly, as our society becomes increasingly technical and technological, it is interesting to note that only about one-fourth of those planning a technical occupation were successful. While the growth rate of professional occupations is projected only to be modest for the balance of the decade (Shelton, 1983), the fact that only about one-fourth of those planning on a Professional 1 occupation and that one-fifth of those planning on a Professional 2 occupation were successful may forecast shortages at these levels as well. The one-fourth success rate for the

Computer/Engineering/Architecture field will be of interest to those concerned with providing sufficient personnel in these areas in the coming years. About one-third of those pursuing Education as a field were successful, further substantiating the conclusion noted above. The recent national concern with providing more scientists and mathematicians is justified when looking at the success rates: only one-fifth of students pursuing these fields successfully attained them. In short, these data as well as the data reported in Research Issue 1 on changing preferences yield some useful indicators of the future supply of people in these occupations and fields.

Subtopic 2: Bivariate Analyses

Summary This subtopic involves bivariate analyses of various predictors of success for each of the field and occupation categories. Several conclusions emerged in the occupation analyses. Three occupations—Professional 1, Professional 2, and Teacher—have the most variables discriminating between successful and unsuccessful pursuit. One reason for this may be that all three of these occupations require postsecondary education; many of the variables analyzed were school-related.

Several general predictors of successful pursuit emerged. High school grade point average was salient in over half of the occupations, and college grade point average was salient in about half of the occupations. Aptitude predicted successful pursuit in four occupations. Together these results suggest that academic aptitude and performance may be general predictors of success. A second general finding was the consonance between sex of the respondent and sex dominance of the occupation. That is, females are more likely to successfully pursue their occupations when these choices involve female-dominated occupations. As a result, females continue to experience lower levels of success in traditionally male occupations.

A third general finding is a relationship between high internality and successful pursuit, suggesting that pursuit is linked to a belief that one has control over one's life. Parental educational aspirations were significant in several occupations, particularly those requiring advanced training. Science and mathematics training were significant in four occupations, highlighting the importance of such training in occupations emphasizing such knowledge. Finally, early childbearing depresses success in four occupations, three of which require advanced training and one of which is female-dominated (Clerical/Sales). These results suggest that early childbearing is dysfunctional for those pursuing advanced training and also that the effects of early childbearing will be the most pronounced in predominantly female occupations.

A final conclusion pertains to the differential importance of the variables. In spite of the similarities summarized above, it is clear that successful pursuit for any given occupation represents a unique combination of variables.

Several of the variables predict successful pursuit of a Teacher occupation. The higher representation of females in the successful group may indicate a greater persistence among females in attaining this traditionally female-dominated occupation. The results for race suggest that minorities experience some difficulties in completing the training and entering the field, or that they switched to other occupations. The importance of an internal locus of control is shown, as is the role of mother's educational aspirations. Location in the academic curriculum is also salient, due undoubtedly to the more substantial academic training obtained. Grades in both high school and college are relevant, suggesting that those who successfully pursue a Teacher occupation pursue their studies more diligently. Those successful have also completed more mathematics, science, and foreign languages coursework. Early marriage and childbearing as well as early work experience all dampen the chances for successful pursuit.

Several conclusions emerged in the analyses of successful pursuit of field of study. Once again, a considerable amount of variability exists in the number of statistically significant predictors per field, ranging from nine for Social Science and Agriculture/Home Economics/Vocational to 19 for Education and 23 for Business. Those fields with a greater number of significant variables are generally fields requiring a separate professional degree (e.g., Education, Business, Health).

Several variables show consistent effects across fields. High school grade point average has a positive effect on success in all nine fields, aptitude is positively linked in eight fields, and college grade point average is positively linked in seven fields. Together these results document the pervasive influence of academic ability and performance on successful pursuit of field of study. Early family commitments depress success rates in eight of the nine fields, and early work experience depresses success rates in all nine fields. Such early commitments clearly make it more difficult for students to successfully pursue their intended fields of study. Mathematics coursework also has a positive effect in eight fields, highlighting the connection between the knowledge and skills gained in such coursework and successful pursuit. Foreign languages coursework is positively linked for seven fields, further testimony to the importance of a diversity of academic preparation. Finally, educational aspirations show a positive linkage in seven fields, while mother's educational aspirations shows positive linkages in six fields. Since all fields require postsecondary education, these data suggest that those aspiring to higher educational levels are more likely to attain such levels.

Several of the variables are insignificant in most or all fields, including such factors as English and social studies coursework, remedial reading and mathematics, the role of significant others, and the provision of employment and educational counseling. This last finding is interesting since all categories require postsecondary education; the lack of an effect for educational counseling suggests that school personnel are not critical for successful pursuit of field. Interestingly, SES and self-concept appeared to be irrelevant. Only a few fields show significant sex differences and the results support the sex consonance hypothesis discussed above.

Several differences and similarities appear in comparing the overall results for field with those for occupation. Generally, the school-related variables and the family and work experience variables seem more relevant for field of study than they do for occupation. The school-related variables undoubtedly provide knowledge, skills, and values more relevant for successful pursuit of field than occupation. The greater salience of family and work commitment for field of study may simply reflect the fact that such commitments are frequently incompatible with the sustained time and attention required in many postsecondary education programs.

Both sets of analyses demonstrate the lack of importance of self-concept and the importance of an internal locus of control. Apparently belief in the value of oneself is not as important as a belief that one has control over one's life. SES does not have the all-pervasive influence frequently assumed, perhaps because its effects are carried through such variables as locus of control and educational aspirations. Both sets of analyses show that mathematics and science training are linked with successful pursuit, although the effects are greater for field. It seems that such preparation provides knowledge and skills that are applicable across various fields and occupations and which enhance students' abilities to successfully execute their plans.

The majority of the predictor variables are relevant for distinguishing those who successfully pursue an Education field from those who do not. Those successful are more likely to be female and white, and to have higher educational aspirations and parental educational aspirations. Such persons are also more likely to have been in the academic curriculum and to have completed more coursework in mathematics, science, and foreign languages. They are also less likely to marry early and to have children early, and are less likely to have early work experience. Perhaps the most interesting results for the Education field are the lack of importance of aptitude and college GPA. Education is the only field where aptitude scores do not predict successful pursuit, and it is one of two fields where a college GPA does not predict successful pursuit. These results underscore the minimal role of aptitude and academic performance in the successful pursuit of Education.

Theoretical Relevance The major contribution to theory development in this section lies in the identification of general and specific factors related to successful pursuit of occupation and field. For example, the results show quite clearly the importance of academic aptitude, performance, and preparation for successful pursuit. This finding is important substantively in that it suggests that successful pursuit is largely the product of individual abilities and commitment to academic matters. Another general finding is the sex consonance hypothesis, whereby females more successfully pursue those occupations and fields that are female-dominated and males more successfully pursue those areas that are male-dominated. This observation reflects a very direct linkage between such macro factors as the sex composition of occupations and such micro factors as successful pursuit of an individually selected preference. This documentation of macro factors substantiates a variety of theoretical conclusions in the status attainment literature. The persistent effect of high internality validates some of the social psychological literature that stresses the importance of such social psychological traits. This finding also underscores the importance of a belief that one has control over one's life; such internality (or fatalism--see Boocock, 1980) lies at the other end of the macro-micro spectrum.

The results also show the importance of early socialization factors, as seen in the linkages between both personal and parental educational aspirations and successful pursuit. Generally, school personnel variables do not show much impact. This conclusion is also theoretically relevant in that it shows that school effects are less relevant than personal background and characteristics. Finally, the results show conclusively that early family and work commitments depress success rates. In short, the results are theoretically relevant in that they help understand the relative importance of several types of variables for successful pursuit. Such analyses afford a better understanding of the status attainment process.

Policy Relevance The results also are a policy relevant for multiple audiences. One of the major theoretical conclusions--the importance of academic aptitude, preparation, performance--may also have substantial policy relevance. The results suggest clearly that successful pursuit will be significantly enhanced to the extent that academics are emphasized. A theme in the report of the National Commission on Excellence in Education is the need for greater emphasis on academics. The implication for federal and educational officials is clear: academic preparation and performance should be stressed in the nation's high schools. Interestingly, one of the most substantial changes between 1972 and 1980 in seniors' assessments of their high schools was their substantially increased feeling that academics should be emphasized (Wagenaar, 1981). In short, seniors want greater emphasis on academics, leading commission studies underscore the centrality of academics, and this report shows how academic aptitude, performance, and preparation are substantially linked with successful pursuit. Programs from the federal level on down to the local level need to be designed and implemented to effectively respond to this situation.

The analyses for the Teacher/Education categories also have policy relevance. Perhaps most interesting is the lack of a connection between aptitude, performance, and preparation and successful pursuit in these categories, contrary to the linkages shown in most other categories. The implication is quite clear: factors other than academic factors are more important for successful pursuit of the Teacher/Education categories. Earlier it was noted that those aspiring to these positions have declined noticeably in aptitude. Together with the lack of a connection between aptitude and successful pursuit, these results underscore again the lack of relevance of aptitude and performance in the areas of teaching and education. The policy implications again are clear: incentives need to be developed, colleges and universities need to revise their entry and exit requirements, states may need to redesign their certification procedures, and the federal government should encourage the states to provide funds for scholarships and program redevelopment so that the rising tide of mediocrity in the academic caliber of future teachers can be stemmed.

Mathematics and science coursework do predict successful pursuit for both the Teacher and Education categories; perhaps these courses produce certain analytical skills that enable young adults to more easily complete their training and to begin working in an occupation related to their field of study. Perhaps students should be encouraged to complete more mathematics and science courses.

The specific results for other occupations and fields may also have policy relevance. For example, various national commissions have called attention to the increased need for more mathematicians and scientists. The results show that a key predictor of successful pursuit in these fields is teacher influence. Perhaps teacher influence is particularly important for this field due to the difficulties in entering and completing this course of study. The policy implication is clear: encourage teachers to encourage students to pursue the sciences and mathematics. Similarly, the results show that coursework in mathematics and science are substantively linked with successful pursuit of a Computer/Engineering/Architecture field. Given the increased demands for such people, the policy implication is to stress coursework in mathematics and science for those showing an interest in this field category.

The results for the specific analyses may enable college and other officials to improve the retention and graduation rates of students in various fields, particularly in those vital to the nation's workforce. Perhaps these findings can be used in conjunction with the success rates themselves to more directly and effectively target remedial assistance and support for the highly talented.

Subtopic 3: Multivariate Analyses

Summary The results of the multivariate analyses of occupation can be summarized in terms of variables found to be important and unimportant. Sex was one of the most important variables, and the results document the relevance of the sex consonance hypothesis noted above. Early work experience is also salient; such experience reduces successful pursuit for those in occupations requiring a college degree and enhances it for several occupations requiring early apprenticeship-type experiences. Similarly, early marriage and childbearing generally reduce success rates among those planning on an occupation requiring a college degree. Academic preparation and performance again appear important. Both college and high school grade point averages are positively related to successful pursuit, as are mathematics and science training. With the notable exception of the Teacher category, aptitude has a positive effect on success rates. Together these results again document the importance of academic aptitude, training, and performance for successful pursuit, particularly among occupations requiring a college degree. The importance of an internal locus of control is also underscored.

The results also show several variables to be relatively unimportant: coursework in foreign languages, social studies and history, and English, remedial reading, educational aspirations, parental aspirations, curriculum, black, SES, employment counseling, influence of teachers and counselors, and self-concept. Hence, successful pursuit of occupation remains independent of several types of coursework, suggesting that high school course content has little effect on successful pursuit. The negligible effect of teachers' and counselors' influence shows the relative unimportance of these school factors.

Grade point average in both college and high school are linked with successful pursuit of a Teacher occupation, as are mathematics and science coursework. These data again reflect the importance of academic performance and preparation. However, the aptitude coefficient is strongly negative, suggesting that more academically capable students depart from their choice of the Teacher category, while the less academically capable are more successful. Females are more successful, reflecting the advantages of selecting a female-dominated occupation. Internal locus of control is also relevant. Both early marriage and childbearing reduce success rates, undoubtedly because these events make it more difficult (especially for women) to successfully complete the required education and entry into the field.

Several conclusions emerged in the multivariate analyses of field. The sex consonance hypothesis is again supported. Both early work experience and early childbearing have consistent negative effects. The results again document the importance of academic performance and training, and to a lesser extent, aptitude. In spite of these similarities, a wide range of coefficients exists, suggesting that there is not one best avenue for successful pursuit of all fields.

The analyses also highlighted the unimportance of several variables: English coursework, remedial mathematics and reading, personal and mothers' educational aspirations, early marriage, curriculum, Hispanic and black, SES, employment counseling, influence of counselors, and self-concept. The unimportance of the counseling variables and the influence of counselors again shows that schools do not play a major role. Finally, the relatively low variance explained for most fields suggests that factors other that those examined may also be relevant.

The results for Education underscore the importance of college academic performance as well as academic preparation, but also show that aptitude is inversely related to successful pursuit. These students seem less academically capable but more academically committed in terms of preparation and performance. Females are again more successful. The negative effects of early childbearing and work experience substantiate the dysfunctional effects of these events. Finally, an internal locus of control is relevant.

Theoretical and Policy Relevance The theoretical relevance of these results parallel those discussed in the bivariate analyses. The multivariate analyses enhance theoretical development by providing a more parsimonious assessment of the net effects of each variable.

Policy relevant issues also parallel those noted above. The major implications again revolve around the results for the Teacher/Education categories, the identification of general factors predicting successful pursuit, and the underscoring of the lack of relevance of most school factors.

Research Issue 3: In-Depth Analysis of 1980 Seniors

Research Issue 3 involves an in-depth analysis of factors associated with selecting each occupation and field. This issue differs from Research Issue 1 since that research issue focused on the changes in a more restricted set of predictor variables. Also, only one cohort is examined in this issue—the 1980 cohort, allowing the inclusion of more variables. The statistical procedures also differed.

Subtopic 1: Bivariate Analyses

Several conclusions emerged in the bivariate analyses of occupation. First, all the variables differed significantly among the categories. Second, the relative magnitude of the values of the independent variables generally reflect a pattern within each category. For example, those aspiring to a Professional occupation come from a higher social class background and have a higher self-concept as well as a more internal locus of control. Both personal and mothers' educational aspirations are higher. They score high on academic aptitude, preparation, performance, and commitment, and hold work values consistent with the demands and opportunities of a Professional occupation. They are also the least likely to expect early family formation. Similar consistent sets of findings exist for many of the other categories.

Third, social class figures prominently in occupational choice. The social class background of students in each category closely corresponds with the prestige ranking of the selected occupation. Also, variables typically related to social class show differences across the categories. For example, not only do higher SES students select higher SES occupations, but they are also more likely to have higher educational aspirations, higher aptitude, greater academic preparation and commitment, and place greater emphasis on such occupational values as freedom to make decisions and engaging in interesting work. They are also less likely to expect early family formation.

Those interested in the Teacher category are more likely to be female and white, and to have a more internal locus of control. Also, personal and mothers' educational aspirations, parental influence, and having been read to while young are all relatively high. In short, the data show future teachers to come from a background emphaszing education and skills associated with education. Future teachers have relatively high academic aptitude and performance and score high on several indicators of academic involvement. In contrast, they place little emphasis on vocational preparation and work experience and are the least likely to have full-time work experience. They are also very involved in extracurricular activities and are particuarly influenced by both counselors and teachers. In the case of teachers' influene, role modeling may be occurring. Consistent with teachers' low salaries, future teachers place little importance on money and job security, which may reflect the reognition that tenure means job security. They do value interesting work and the opportunity to meet and work with people.

Several conclusions also emerged from the field analyses. The values for Preprofessional students differ the most from the other fields. Second, scores on the school experience variables typically reflect the demands of the field. For example, future Preprofessional students stress academic preparation, Humanities/Arts students stress English, and Biology/Physical Science/Mathematics and Computer/Engineering/Architecture students stress advanced science and mathematics coursework. Third, very distinct constellations of work values emerge. For example, Preprofessional students stress interesting work and job autonomy, Business students stress income and job security, and Education students emphasize working with people.

Education students are primarily white females with high parental influence but have comparatively low self-concept. Their academic aptitude and commitment to academic preparation are both very weak. While they themselves have not aggressively pursued academic training, they do believe in the importance of academics as seen in their belief that schools should emphasize academics more. They also note substantial levels of teacher and counselor influence. Their participation in extracurricular activities is also high. In short, Education students seem to be committed to the school as an institution, although their own academic aspirations, aptitude and performance are relatively weak. What matters to these students is the opportunity to work with other people; money and even work itself are of much less importance than in most other fields. Finally, because so many are women, they are more likely to expect early family formation.

Subtopic 2: Multivariate Analyses

Summary Several conclusions emerged from the multivariate analyses of occupation. First, considerable variation exists in the substantive importance of the discriminant functions. The highest canonical correlation is that for the Craftsman/

Operative category, with Professional 2 and Clerical/Sales placing a close second and third. The other correlations were modest. Also, the variance explained was low for most categories, although the value for the Craftsman/Operative category was 19%. For most occupations, then, factors other than those considered appear important.

Another conclusion is the pervasive influence of both sex and educational aspirations. Females continue to select primarily female-dominated occupations. There is also a consistent relationship between the educational demands of an occupation and the educational aspirations of people in that category.

Third, the results for the coursework variables are typically consistent with the demands of the occupation. For example, those in the Professional 2 category are more likely to take science courses while those in the Clerical/Sales category are more likely to take vocational courses. Similarly, there is a consistency between the work values held and the typical demands of the selected occupation. For example, those selecting a Professional 2 occupation stress job autonomy, while those selecting a Manager/Proprietor occupation emphasize good income. Finally, those expecting early family formation tend to be women pursuing traditionally female-dominated occupations. In short, distinct similarities and differences exist across the categories.

Future teachers are predominantly female. Perhaps because their planned occupation involves education, these students have relatively high educational aspirations and come from families holding high aspirations. Future teachers come from lower SES backgrounds, and blacks are less likely to select this category. They are also more externally oriented and have distinctly lower aptitude scores. In spite of lower aptitude and coursework preparation, however, these students are absent less often and participate more in sports activities. The negative effects of job security and good income may mean they see tenure as easily obtained and that the widely publicized low salaries have already deterred those for whom a good income is important. The positive effect of the expected family size coefficient reflects the congruence between the teacher and the mother roles.

Several conclusions emerged from the multivariate analyses of field. First, the canonical correlations are modest, with corresponding modest levels of variance explained. Hence, factors other than those examined may be at work.

Some variables have greater discriminatory power than others. Sex, aptitude, and educational aspirations are the most salient. Students still select fields based on traditional sex-role stereotypes, they select fields based on the academic requirements of the fields, and they select fields consonant with their educational aspirations. The school-related variables most relevant are regular and advanced science coursework and vocational coursework. These results suggest that students select fields based on their academic preparation, or perhaps that they plan their high school programs in concert with their intended field of study. These results also show that academic performance influences field of study selection, and that teachers have a distinctly positive or negative effect in several categories.

The work values are also critical, especially job security, autonomy, working with people, and good income. Students seem to select fields that generally match their work values. For example, Health students value job security, Preprofessional students value job autonomy, and Business students value working with people and a good income. Finally, the family expectation variables are relatively unimportant, suggesting that family expectations do not figure prominently in students' field choices.

Education students are predominantly female and have high educational aspirations. Minorities are somewhat underrepresented, as are those from higher social class backgrounds. Teaching may still be an avenue for social mobility according to these results. The negative effect of aptitude supports previous research on the academic caliber of Education students. These students have also taken less advanced mathematics and science, foreign languages, and vocational coursework, although they have taken more science coursework. They seem committed to school, as reflected in the role of teacher influence and participation in sports activities.

Theoretical Relevance These results are theoretically relevant in several respects. First, they contribute to an extremely lean literature on the characteristics of adolescents who select various fields and occupations. To date, few major national empirical studies have been done that allow a detailed analysis of the characteristics of those selecting each category. The results therefore help researchers, education officials, and federal officials to better understand the unique characteristics of each subgroup.

Second, the results help determine the relative importance of several types of variables for selecting each occupation and field: individual background variables, individual school experiences variables, several school characteristics, values, and expected family formation. For example, the results show that school-related variables are more salient than personal background variables for those aspiring to a Technical occupation. Similarly, school variables are relatively unimportant to those aspiring to a Manager/Proprietor occupation. Furthermore, the results show that, overall, the school effects variables are of lesser importance. The results contribute to the school effects literature by showing that personal background variables are more salient than the few school effects variables examined. The results also show that individual experiences in school, such as grades and coursework, are somewhat more important than the school resource variables.

Third, the findings help substantiate or test some of the conclusions noted in the literature. For example, they support some of the conclusions regarding race and sex differences, as well as the role of family background. The results also provide substantial support for previous research highlighting the weak academic aptitude and preparation of Education students. A direct linkage between social class background and prestige of selected occupation/field also exists.

Fourth, the profiles developed allow a description of the importance of each type of variable. The same variables are not necessarily important across all categories. Instead, a few variables seem relevant across categories, such as sex and aptitude, but the more general conclusion is that each profile is unique.

Policy Relevance One of the most interesting policy relevant analyses are those pertaining to the Teacher/Education categories. While some of the results for these two sets of analyses differ, several other findings were similar. In general, the Education (field) analyses may be more applicable since the comparison group includes all others planning to attend college. On virtually all measures of academic aptitude and performance, Education students scored the lowest or among the lowest. The policy implications are clear: education officials and legislators at all levels should do whatever possible to raise the academic abilities and performance of Education students. College officials and those in schools of education need to more carefully assess who is admitted and graduated. Hiring officials should concentrate on hiring only the most talented, local boards of education should provide additional funds to attract such teachers, state officials should consider encouraging the development of merit pay and staged careers to attract and retain such teachers, and federal officials should encourage the states to provide special funding for scholarships and other programs to attract and retain highly capable Education students.

The results for several of the other categories are also policy relevant. The relatively low percentage female in the Biology/Physical Science/Mathematics category warrants further policy attention for attracting more females into these fields. Similarly, the percentage black in this category is the lowest, also warranting further recruitment and retention activities. These students are also among the least likely to report counselor influence; perhaps counselors and other educators need to focus on the needs of future of future mathematics and science students. Such activities may help increase the numbers of those interested in these fields. Those in the Computer/Engineering/Architecture category are the least likely to be female, also warranting remedial strategies. Such students also feel that practical work experience should be stressed more, a possible policy implementation. The relatively low academic performance, commitment, and preparation of Business students should be of interest to college officials in their responses to the masses of students interested in this field.

In summary, this study has presented considerable data on several centrally important issues for understanding the transition from youth to adulthood: the changing occupation and field of study preferences such youth hold, the nature of those who select each category, the changes in various independent variables associated with changing preferences, how successfully youth attain their goals, and factors associated with such successful pursuit. Not only are the results interesting, but they also demonstrate clear theoretical and policy relevance. As such, they will help improve the nation's educational system.

Appendix 1. Occupational Codes

Category	Codes
Professional 2	30, 31, 34-54, 61-73, 86, 91-96, 102-140
Professional 1	1-2, 6-26, 32-33, 55-56, 74-76, 90, 100-101, 174-195
Technical	3-5, 80-85, 150-173
Teacher	141-145
Manager/Proprietor	201-245
Craftsman/Operative	401-715
Clerical/Sales	260-395
Service	901-965, 980-984
Farmer/Laborer	740-824
Military	992
Housewife	987

Appendix 2. Field of Study Codes

Category	Codes
Preprofessional	1204-1207, 1210, 1218, 1219, 1401, 70800
Humananities/Arts	301-314, 601-605, 1001-1199, 1501-1510, 1601, 2210-2213, 2301-4901, 4903, 140400.
Education	801-823, 826-899
Business	501-517, 40100-49900
Social Science	824-825, 1222, 2001-2010, 2101-2102, 2104-2209, 2214-2215, 8270
Biology/Physical Science/ Mathematics	401-499, 1701-1999, 4902
Computer/Engineering/ Architecture	201-206, 701-799, 901-999, 4904
Agriculture/Home Economics/ Vocational	101-199, 1301-1307, 2103, 10100-19900, 90101-90299, 140100-140300, 140401-179900
Health	1201-1203, 1208-1209, 1211-1217, 1220-1221, 1223-1299, 70101-70700, 70901-79900

Appendix 3. Means and Standard Deviation for Variables Used in Occupation Analyses, Research Issue 1

Variable	Cohort			
	1972		1980	
	Mean	SD	Mean	SD
Sex (% female)	52.5	49.9	52.2	49.9
SES	-.006	.680	-.030	.739
Race				
% Hispanic	3.4	18.2	6.3	24.3
% Black	8.5	27.8	11.6	32.0
% White	88.1	32.4	82.1	38.4
Aptitude	51.18	8.41	50.21	8.10
Curriculum				
% General	30.1	37.4	36.6	41.7
% Academic	46.5	49.9	38.9	48.8
% Vocational	23.4	35.4	24.5	36.9
Grades (% A's and B's)*	29.7	38.4	33.4	42.4
Grades (GPA)*	3.08	.73	3.13	.73
Math courses	3.89	1.87	4.08	1.91
English courses	5.98	.92	5.88	1.12
Science courses	3.59	1.78	3.48	1.95
Foreign language courses	2.74	2.11	1.67	2.07
Self-concept	.011	.704	.009	.731
Locus of control	.024	.654	.012	.662
Influence of (% "very important")				
Parents	43.4	49.6	29.9	45.8
Counselors	9.0	28.6	10.8	31.1
Teachers	10.9	31.1	14.6	35.4
Importance of (% "very important")				
Money	16.8	37.4	31.2	46.3
Success in work	85.4	35.3	89.0	31.3
Provision of counseling services to help (% agree):				
Continue education	57.9	49.4	62.7	48.4
Find employment	31.8	46.6	43.2	49.5

*The % A's and B's was used in the bivariate analyses and the GPA was used in the regression analyses.

Appendix 4. Means and Standard Deviation for Variables Used in Field Analyses, Research Issue 1

	Cohort			
	1972		1980	
Variable	Mean	SD	Mean	SD
Sex (% female)	49.4	49.9	54.3	49.8
SES	.235	.683	.189	.721
Race				
% Hispanic	2.8	16.5	5.3	22.3
% Black	6.1	23.9	10.5	30.6
% White	91.1	28.5	84.2	36.4
Aptitude	55.02	7.41	53.50	7.80
Curriculum				
% General	21.9	37.1	27.5	39.4
% Academic	70.1	45.8	58.4	49.2
% Vocational	8.0	27.4	14.1	33.4
Grades (% A's and B's)	40.8	46.7	46.4	49.3
Grades (GPA)*	3.29	.66	3.37	.66
Math courses	4.49	1.76	4.63	1.78
English courses	6.09	.83	6.02	.93
Science courses	4.14	1.74	4.03	1.93
Foreign language courses	3.37	2.01	2.26	2.19
Self-concept	.069	.686	.090	.709
Locus of control	.175	.579	.174	.602
Influence of (% "very important")				
Parents	48.2	49.9	36.6	48.2
Counselors	10.1	30.2	12.1	32.6
Teachers	11.8	32.2	16.9	37.5
Importance of (% "very important")				
Money	15.9	36.6	29.3	45.5
Success in work	85.5	35.2	91.4	28.1
Provision of counseling services to help (% agree):				
Continue education	61.9	48.6	66.0	47.4
Find employment	22.4	41.7	37.6	48.4

*The % A's and B's was used in the bivariate analyses and the GPA was used in the regression analyses.

Appendix 5. Means and Standard Deviations for Variables Used in Occupation Analyses, Research Issue 2

Variable	Mean	Standard Deviation
Sex (% female)	52.5	49.9
Race		
% Hispanic	3.4	18.2
% Black	8.5	27.8
% White	88.1	32.4
Self-concept (mean)	.011	.704
Locus of control (mean)	.024	.654
SES (mean)	-.006	.680
Educ aspir. (mean)	4.03	1.39
Father's aspir. (mean)	4.12	1.20
Mother's aspir. (mean)	4.15	1.20
Par. infl. (% "great deal")	43.4	49.6
Curriculum		
% General	30.1	37.4
% Academic	46.5	49.9
% Vocational	23.4	35.4
Aptitude (mean)	51.18	8.41
H.S. GPA (mean)	3.08	.73
Math courses (mean)	3.89	1.87
English courses (mean)	5.98	.92
Science courses (mean)	3.59	1.78
Soc studies courses (mean)	5.21	1.42
Foreign languages courses (mean)	2.74	2.11
Remedial reading (% yes)	6.2	24.2
Remedial math (% yes)	4.0	19.6
Tchr. infl. (% "great deal")	10.9	31.1
Coun. infl. (% "great deal")	9.0	28.6
Work couns. (% agree)	31.8	46.6
Educ. couns. (% agree)	57.9	49.4
Coll. GPA (mean)	2.95	.61
Early marriage (% yes)	46.8	49.9
Early children (% yes)	25.5	43.6
Early work (mean)	2.62	1.36

Appendix 6. Means and Standard Deviations for Variables Used in Field Analyses, Research Issue 2

Variable	Mean	Standard Deviation
Sex (% female)	49.4	49.9
Race		
% Hispanic	2.8	16.5
% Black	6.1	23.9
% White	91.1	28.5
Self-concept (mean)	.069	.686
Locus of control (mean)	.175	.579
SES (mean)	.235	.683
Educ aspir. (mean)	4.93	.80
Father's aspir. (mean)	4.85	.84
Mother's aspir. (mean)	4.89	.82
Par. infl. (% "great deal")	48.2	49.9
Curriculum		
% General	21.9	37.1
% Academic	70.1	45.8
% Vocational	8.0	27.4
Aptitude (mean)	55.02	7.41
H.S. GPA (mean)	3.29	.66
Math courses (mean)	4.49	1.76
English courses (mean)	6.09	.83
Science courses (mean)	4.14	1.74
Soc studies courses (mean)	5.24	1.38
Foreign languages courses (mean)	3.37	2.01
Remedial reading (% yes)	3.0	17.1
Remedial math (% yes)	2.3	15.0
Tchr. infl. (% "great deal")	11.8	32.2
Coun. infl. (% "great deal")	10.1	30.2
Work couns. (% agree)	22.4	41.7
Educ. couns. (% agree)	61.9	48.6
Coll. GPA (mean)	2.96	.57
Early marriage (% yes)	35.8	47.6
Early children (% yes)	12.4	33.0
Early work (mean)	2.26	1.43

Appendix 7. Means and Standard Deviations for Variables Used in Occupation Analyses, Research Issue 3

Variable	Mean	Standard Deviation
Sex (% female)	52.2	49.9
Race		
% Hispanic	6.3	24.3
% black	11.6	32.0
% white	82.1	38.4
Concept (mean)	.009	.731
Locus (mean)	.012	.662
SES (mean)	-.030	.739
EducAsp (mean)	3.07	1.43
MothAsp (mean)	3.34	1.37
ParInfl (% "great deal")	29.9	45.8
ReadIo (% Yes)	51.8	50.0
Curriculum		
% General	36.6	41.7
% Academic	38.9	48.8
% Vocational	24.5	36.9
Aptitude (mean)	50.21	8.10
H.S. GPA (mean)	3.13	.73
Math (mean)	4.08	1.91
English (mean)	5.88	1.12
Science (mean)	3.48	1.95
HistSoc (mean)	4.64	1.56
FrnLang (mean)	1.67	2.07
RemMth (% Yes)	30.5	46.1
RemEng (% Yes)	31.3	46.4
AdvMth (mean)	2.12	1.56
AdvSci (mean)	.58	.76
VocCrse (mean)	4.06	2.56
CoopWS (% Yes)	20.1	40.0
Homewk (mean)	3.45	1.34
CrseHard (% "great deal")	3.1	17.4
StudyHab (% "great deal")	17.0	37.6
Absent (mean)	2.49	1.32
AcadQual (mean)	2.71	.76
AcadEmph (% agree)	66.8	47.1
VocEmph (% agree)	69.4	46.1
WorkEmph (% agree)	58.3	49.3
EdCouns (% agree)	62.7	48.4
WorkCouns (% agree)	43.2	49.5
CounsInfl (% "great deal")	10.8	31.1
TchrInfl (% "great deal")	14.6	35.4
SportAct (mean)	.91	.91
AcadAct (mean)	.78	.91
ServAct (mean)	.18	.39
WrkImpt (% agree)	89.0	31.3
MonyImpt (% agree)	31.2	46.3
Work Values		
Exper (% "very impt")	30.9	46.2
GdInc (% "very impt")	46.0	49.8
JobSec (% "very impt")	58.1	49.3
IntWk (% "very impt")	85.4	35.3
FreeDec (% "very impt")	62.1	48.5
People (% "very impt")	65.9	47.4
WrkStatus (% fulltime)	11.5	31.9
Expectations		
ErlyMarr (% Yes)	27.8	44.8
ErlyChld (% Yes)	9.9	29.9
NumChld (mean)	3.18	1.03

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Appendix 8. Means and Standard Deviations for Variables Used in Field Analyses, Research Issue 3

Variable	Mean	Standard Deviation
Sex (% female)	54.3	49.8
Race		
% Hispanic	5.3	22.3
% black	10.5	30.6
% white	84.2	36.4
Concept (mean)	.090	.709
Locus (mean)	.174	.602
SES (mean)	.189	.721
EducAsp (mean)	3.98	.95
MothAsp (mean)	4.00	.96
ParInfl (% "great deal")	36.6	48.2
ReadTo (% Yes)	57.8	49.4
Curriculum		
% General	27.5	39.4
% Academic	58.4	49.2
% Vocational	14.1	33.4
Aptitude (mean)	53.50	7.80
H.S. GPA (mean)	3.37	.66
Math (mean)	4.63	1.78
English (mean)	6.02	.93
Science (mean)	4.03	1.93
HistSoc (mean)	4.77	1.47
FrnLang (mean)	2.26	2.19
RemMth (% Yes)	20.3	40.2
RemEng (% Yes)	21.9	41.3
AdvMth (mean)	2.86	1.43
AdvSci (mean)	.85	.82
VocCrse (mean)	3.59	2.59
CoopWS (% Yes)	13.2	33.9
Homewk (mean)	3.86	1.28
CrseHard (% "great deal")	1.6	12.4
StudyHab (% "great deal")	15.5	36.2
Absent (mean)	2.29	1.19
AcadQual (mean)	2.84	.75
AcadEmph (% agree)	68.5	46.5
VocEmph (% agree)	61.3	48.7
WorkEmph (% agree)	53.2	49.9
EdCouns (% agree)	66.0	42.4
WorkCouns (% agree)	37.6	48.4
CounsInfl (% "great deal")	12.1	32.6
TchrInfl (% "great deal")	16.9	37.5
SportAct (mean)	1.05	.93
AcadAct (mean)	.92	.96
ServAct (mean)	.25	.43
WrkImpt (% agree)	91.4	28.1
MonyImpt (% agree)	29.3	45.5
Work Values		
Exper (% "very impt")	27.5	44.6
GdInc (% "very impt")	41.8	49.3
JobSec (% "very impt")	58.4	49.3
IntWk (% "very impt")	89.6	30.5
FreeDec (% "very impt")	62.8	48.3
People (% "very impt")	65.4	47.6
WrkStatus (% fulltime)	8.1	27.2
Expectations		
ErlyMarr (% Yes)	18.6	38.9
ErlyChld (% Yes)	4.7	21.2
NumChld (mean)	3.25	1.02

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TABLE 3.1. PERCENTAGE DISTRIBUTION OF OCCUPATIONAL PLANS BY 1972 AND 1980 COHORT

OCCUPATION	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO 1980:1972	NAT.LOG OF RATIO
Professional 2	11.4	12.8	1.4*	1.12	.116
Professional 1	26.2	27.2	1.0	1.04	.037
Technical	5.6	8.2	2.6*	1.46	.381
Teacher	10.9	3.9	-7.0*	.35	-1.028
Manager/Proprietor	4.2	11.1	6.9*	2.64	.972
Craftsman/Operative	11.9	10.7	-1.2*	.90	-.106
Clerical/Sales	15.9	11.9	-4.0*	.75	-.290
Service	7.8	5.3	-2.5*	.68	-.386
Farmer/Laborer	3.3	3.9	.6*	1.18	.167
Military	1.6	2.0	.4*	1.25	.223
Housewife	1.4	2.9	1.5*	2.07	.728

* p _ .01

TABLE 3.2 PERCENTAGE DISTRIBUTION OF INTENDED FIELD OF STUDY BY 1972 AND 1980 COHORT

FIELD	COHORT 1972	 1980	1980-1972 DIFFERENCE	RATIO 1980:1972	NAT.LOG. OF RATIO
Preprofessional	12.0	7.8	-4.2*	.65	-.431
Humanities/Arts	15.4	14.2	-1.2*	.92	-.081
Education	11.9	6.5	-5.4*	.55	-.605
Business	13.0	23.6	10.6*	1.82	.596
Social Science	11.4	7.7	-3.7*	.68	-.392
Biology/Physical Science/Math	7.7	5.8	-1.9*	.75	-.283
Computer/ Engineering/ Architecture	8.7	16.9	8.2*	1.94	.664
Agriculture/ Home Economics/ Vocational	8.1	8.5	.4	1.05	.048
Health	11.9	9.1	-2.8*	.76	-.268

* $p \leq .01$

TABLE 3.3. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING PROFESSIONAL 2 OCCUPATION

VARIABLE	COHORT 1972	1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	33.7	51.4	17.7*	1.53	.422
SES (mean)	.38	.31	-.07*		
Race					
% Hispanic	2.0	6.0	4.0*	3.00	1.098
% Black	7.0	11.0	4.0*	1.57	.452
% White	91.0	83.1	-7.9*	.91	-.091
Aptitude (mean)	57.28	55.71	-1.57*		
Curriculum					
% General	14.8	23.1	8.3*	1.56	.445
% Academic	81.6	69.9	-11.7*	.86	-.155
% Vocational	3.6	7.1	3.5*	1.97	.679
Grades (% A's and B's)	48.8	54.5	5.7*	1.12	.110
Math courses (mean)	4.95	4.97	.02		
English courses (mean)	6.13	6.04	-.10*		
Science courses (mean)	4.78	4.68	-.10		
Foreign Language courses (mean)	3.69	2.66	-1.03*		
Self-concept (mean)	.17	.17	.00		
Locus of control (mean)	.24	.25	.01		
Influence of (% "very important")					
Parents	49.3	37.9	-11.4*	.77	-.263
Counselors	10.3	11.3	1.0	1.10	.092
Teachers	10.4	17.7	7.3*	1.70	.532
Importance of (% "very important")					
Money	19.5	29.2	9.7*	1.50	.404
Success in work	87.0	90.7	3.7*	1.04	.042
Provision of Counseling Services to help (% agree):					
Continue education	58.2	66.7	8.5*	1.15	.136
Find employment	17.4	32.2	14.8*	1.85	.615

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.4. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING PROFESSIONAL 1 OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	52.6	57.5	4.9*	1.09	.089
SES (mean)	.10	.10	.00		
Race					
% Hispanic	3.3	5.4	2.1*	1.64	.492
% Black	10.1	12.0	1.9*	1.19	.172
% White	86.6	82.5	-4.1*	.95	-.049
Aptitude (mean)	53.13	52.44	-.69*		
Curriculum					
% General	28.0	32.5	4.5*	1.16	.150
% Academic	60.5	52.4	-8.1*	.87	-.144
% Vocational	11.5	15.2	3.7*	1.32	.279
Grades (% A's and B's)	34.6	41.4	6.8*	1.20	.179
Math courses (mean)	4.22	4.44	.22*		
English courses (mean)	6.03	5.99	-.04		
Science courses (mean)	3.93	3.83	-.10*		
Foreign Languages courses (mean)	3.07	2.08	-.99*		
Self-concept (mean)	.00	.06	.06*		
Locus of control (mean)	.08	.12	.04*		
Influence of (% "very important")					
Parents	43.4	32.9	-10.5*	.76	- .277
Counselors	9.6	11.9	2.3*	1 .24	.215
Teachers	11.3	17.1	5.8*	1 .51	.414
Importance of (% "very important")					
Money	15.0	29.6	14.6*	1.97	.680
Success in work	84.9	90.9	6.0*	1.07	.068
Provision of Counseling Services to help (% agree):					
Continue education	60.4	63.4	3.0*	1.05	.048
Find employment	26.1	37.3	11.2*	1.43	.357

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.5. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING TECHNICAL OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	41.6	38.5	-3.1	.93	-.077
SES (mean)	-.01	-.08	-.07*		
Race					
% Hispanic	3.4	6.9	3.5*	2.03	.708
% Black	7.3	14.5	7.2*	1.99	.686
% White	89.3	78.6	-10.7*	.88	-.128
Aptitude (mean)	52.29	50.85	-1.44*		
Curriculum					
% General	27.6	34.0	6.4*	1.23	.209
% Academic	54.3	39.9	-14.4*	.73	-.308
% Vocational	18.1	26.1	8.0*	1.44	.366
Grades (% A's and B's)	26.8	33.0	6.2*	1.23	.208
Math courses (mean)	4.34	4.50	.16		
English courses (mean)	5.96	5.89	-.07		
Science courses (mean)	3.96	3.68	-.28*		
Foreign Language courses (mean)	2.72	1.62	-1.10*		
Self-concept (mean)	.02	.01	-.01		
Locus of control (mean)	.09	.02	-.07*		
Influence of (% "very important")					
Parents	42.5	29.5	-13.0*	.69	-.365
Counselors	9.3	12.5	3.2*	1.34	.300
Teachers	8.9	15.5	6.6*	1.74	.555
Importance of (% "very important")					
Money	21.1	32.7	11.6*	1.55	.438
Success in work	89.1	91.8	2.7	1.03	.030
Provision of Counseling Services to help (% agree):					
Continue education	62.6	66.1	3.5	1.06	.054
Find employment	34.1	43.9	9.8*	1.29	.253

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.6. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING TEACHER OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	72.6	81.9	9.3*	1.13	.121
SES (mean)	.12	.02	-.10*		
Race					
% Hispanic	3.6	6.4	2.8*	1.77	.575
% Black	8.5	8.7	.2	1.02	.023
% White	87.9	85.0	-2.9	.97	-.034
Aptitude (mean)	53.59	50.60	-2.99*		
Curriculum					
% General	22.2	41.0	18.8*	1.85	.613
% Academic	71.9	47.6	-24.3*	.66	-.412
% Vocational	6.0	11.5	5.5*	1.92	.651
Grades (% A's and B's)	42.9	39.8	-3.1	.93	-.075
Math courses (mean)	4.31	3.95	-.36*		
English courses (mean)	6.11	5.98	-.13		
Science courses (mean)	3.79	3.40	-.39*		
Foreign Language courses (mean)	3.45	2.01	-1.44*		
Self-concept (mean)	.07	-.08	-.15*		
Locus of control (mean)	.18	.06	-.12*		
Influence of (% "very important")					
Parents	54.2	34.0	-20.2*	.63	-.466
Counselors	15.4	13.4	-2.0	.87	-.139
Teachers	23.2	24.1	.9	1.04	.039
Importance of (% "very important")					
Money	10.3	17.5	7.2*	1.70	.530
Success in work	84.0	88.3	4.3	1.05	.050
Provision of Counseling Services to help (% agree):					
Continue education	68.7	68.0	-.7	.99	-.010
Find employment	26.3	42.6	16.3*	1.62	.482

* $p \leq .01$

[1] Ratios and natural logs not provided for variables with means.

TABLE 3.7. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING MANAGER/PROPRIETOR OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	23.5	42.0	18.5*	1.79	.581
SES (mean)	.18	.13	-.05		
Race					
% Hispanic	3.9	5.1	1.2	1.31	.268
% Black	6.8	12.0	5.2*	1.76	.568
% White	89.4	83.0	-6.4*	.93	-.074
Aptitude (mean)	51.37	50.12	-1.25*		
Curriculum					
% General	28.9	39.2	10.3*	1.36	.305
% Academic	45.3	37.8	-7.5*	.83	-.181
% Vocational	25.8	23.1	-2.7	.91	-.091
Grades (% A's and B's)	23.5	28.3	4.8*	1.20	.186
Math courses (mean)	3.92	4.10	.18*		
English courses (mean)	6.01	5.90	-.11*		
Science courses (mean)	3.61	3.34	-.27*		
Foreign Language courses (mean)	2.52	1.73	-.79*		
Self-concept (mean)	.10	.07	-.03		
Locus of control (mean)	.07	.04	-.03		
Influence of (% "very important")					
Parents	45.1	32.3	-12.8*	7.2	-.334
Counselors	9.1	10.3	1.2	1.13	.124
Teachers	8.4	11.5	3.1*	1.37	.314
Importance of (% "very important")					
Money	24.6	37.8	13.2*	1.54	.430
Success in work	90.4	90.7	.3	1.00	.003
Provision of Counseling Services to help (% agree):					
Continue education	56.3	59.9	3.6	1.06	.061
Find employment	25.2	42.5	17.3*	1.69	.523

* $p \leq 01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.8. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING CRAFTSMAN/OPERATIVE OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	12.0	10.2	-1.8	.85	- .163
SES (mean)	-.27	-.28	-.01		
Race					
% Hispanic	4.1	7.6	3.5*	1.85	.617
% Black	8.9	9.2	.3	1.03	.033
% White	87.0	83.1	-3.9*	.96	-.050
Aptitude (mean)	46.39	46.20	-.19		
Curriculum					
% General	43.9	45.3	1.4	1.03	.031
% Academic	17.2	14.2	-3.0*	.83	-.192
% Vocational	39.0	40.5	1.5	1.04	.038
Grades (% A's and B's)	8.4	12.5	4.1*	1.49	.400
Math courses (mean)	3.33	3.45	.12		
English courses (mean)	5.85	5.59	-.26*		
Science courses (mean)	2.95	2.86	-.09		
Foreign Language courses (mean)	1.25	.67	-.58*		
Self-concept (mean)	-.02	-.02	.00		
Locus of control (mean)	-.26	-.24	.02		
Influence of (% "very important")					
Parents	37.2	24.2	-13.0*	.65	-.430
Counselors	6.2	9.1	2.9*	1.47	.384
Teachers	8.1	11.3	3.2*	1.40	.333
Importance of (% "very important")					
Money	26.2	42.0	15.8*	1.60	.472
Success in work	86.3	88.3	2.0	1.02	.023
Provision of Counseling Services to help (% agree):					
Continue education	51.1	57.8	6.7*	1.13	.123
Find employment	39.6	51.3	11.7*	1.30	.259

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.9. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING CLERICAL/SALES OCCUPATION

VARIABLE	COHORT 1972	 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT. LOG OF RATIO
Sex (% female)	92.0	87.1	-4.9*	.95	-.055
SES (mean)	-.25	-.29	-.04		
Race					
% Hispanic	4.2	7.7	3.5*	1.83	.606
% Black	9.4	14.5	5.1*	1.54	.433
% White	86.4	77.9	-8.5*	.90	-.104
Aptitude (mean)	47.99	46.32	-1.67*		
Curriculum					
% General	27.4	35.4	8.0*	1.29	.256
% Academic	17.7	17.8	.1	1.01	.006
% Vocational	55.0	46.8	-8.2*	.85	-.161
Grades (% A's and B's)	28.8	29.6	.8	1.03	.030
Math courses (mean)	2.99	3.40	.41*		
English courses (mean)	5.90	5.82	-.08*		
Science courses (mean)	2.64	2.64	.00		
Foreign Language courses (mean)	2.15	1.18	-.97*		
Self-concept (mean)	-.09	-.15	-.06*		
Locus of control (mean)	-.04	-.10	-.06*		
Influence of (% "very important")					
Parents	40.4	25.0	-15.4*	.62	-.480
Counselors	6.7	10.6	3.9*	1.58	.459
Teachers	9.4	14.5	5.1*	1.54	.433
Importance of (% "very important")					
Money	11.7	26.9	15.2*	2.30	.833
Success in work	83.8	88.3	4.5*	1.05	.052
Provision of Counseling Services to help (% agree):					
Continue education	54.8	63.3	8.5*	1.16	.144
Find employment	47.8	55.7	7.9*	1.17	.153

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* $p < .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.10. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING SERVICE OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	70.7	68.1	-4.6	.94	-.065
SES (mean)	-.17	-.25	-.08*		
Race					
% Hispanic	3.9	7.6	3.7*	1.95	.667
% Black	7.3	10.7	3.4*	1.47	.382
% White	88.8	81.7	-7.1*	.92	-.083
Aptitude (mean)	47.42	46.45	-.97*		
Curriculum					
% General	45.6	51.7	6.1*	1.13	.126
% Academic	27.0	20.8	-6.2	.77	-.261
% Vocational	27.5	27.5	0.0	1.00	.000
Grades (% A's and B's)	16.9	19.8	2.9	1.17	.158
Math courses (mean)	3.12	3.34	.22*		
English courses (mean)	5.81	5.76	-.05		
Science courses (mean)	3.08	2.90	-.18		
Foreign Language courses (mean)	2.15	1.13	-1.02*		
Self-concept (mean)	-.06	-.11	-.05		
Locus of control (mean)	-.06	-.16	-.10*		
Influence of (% "very important")					
Parents	39.5	23.4	-16.1*	.59	-.523
Counselors	8.2	11.0	2.8	1.34	.294
Teachers	6.6	10.2	3.6*	1.55	.435
Importance of (% "very important")					
Money	14.2	29.5	15.3*	2.08	.731
Success in work	85.8	87.7	1.9	1.02	.022
Provision of Counseling Services to help (% agree):					
Continue education	56.1	61.1	5.0	1.09	.085
Find employment	37.1	45.4	8.3*	1.22	.202

* $p < .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.11. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING FARMER/LABORER OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	11.2	13.3	2.1	1.19	.172
SES (mean)	-.23	-.28	-.05*		
Race					
% Hispanic	2.4	6.6	4.2*	2.75	1.012
% Black	2.6	4.7	2.1	1.81	.592
% White	95.1	88.7	-6.4*	.93	-.074
Aptitude (mean)	47.19	46.51	-.68*		
Curriculum					
% General	47.6	48.2	.6	1.01	.013
% Academic	21.7	15.5	-6.2*	.71	-.336
% Vocational	30.7	36.3	5.6	1.18	.168
Grades (% A's and B's)	11.9	14.5	2.6	1.22	.198
Math courses (mean)	3.27	3.40	.13		
English courses (mean)	5.82	5.67	-.15		
Science courses (mean)	3.19	2.93	-.26*		
Foreign Language courses (mean)	1.49	.69	-.80*		
Self-concept (mean)	-.08	-.07	.01		
Locus of control (mean)	-.29	-.23	.06*		
Influence of (% "very important")					
Parents	34.7	25.1	-9.6*	.72	-.324
Counselors	3.7	8.0	4.3*	2.16	.771
Teachers	6.0	8.8	2.8	1.47	.383
Importance of (% "very important")					
Money	28.1	38.4	10.3*	1.37	.312
Success in work	84.5	85.0	.5	1.01	.006
Provision of Counseling Services to help (% agree):					
Continue education	45.7	58.4	12.7*	1.28	.245
Find employment	31.5	51.9	20.4*	1.65	.499

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.12. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING MILITARY OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	17.7	25.3	7.6	1.43	3.57
SES (mean)	-.02	-.25	-.23		
Race					
% Hispanic	3.3	8.9	5.6*	2.70	.992
% Black	8.3	25.0	16.7*	3.01	1.100
% White	88.4	66.1	-22.3*	.75	-.291
Aptitude (mean)	51.10	49.14	-1.96		
Curriculum					
% General	38.3	45.7	7.4	1.19	1.77
% Academic	44.6	27.3	-17.3*	.61	-.491
% Vocational	17.1	27.0	9.9*	1.58	.457
Grades (% A's and B's)	21.3	23.6	2.3	1.11	.103
Math courses (mean)	4.16	4.20	.04		
English courses (mean)	5.96	5.81	-.15		
Science courses (mean)	3.84	3.53	-.31		
Foreign Language courses (mean)	2.59	1.57	-1.02*		
Self-concept (mean)	.12	.02	-.10		
Locus of control (mean)	.07	-.16	-.23		
Influence of (% "very important")					
Parents	48.7	20.6	-28.1*	.42	-.860
Counselors	9.7	7.2	-2.5	.74	-.300
Teachers	9.4	9.7	.3	1.03	.031
Importance of (% "very important")					
Money	18.9	32.4	13.5*	1.71	.539
Success in work	88.0	87.3	-.7	.99	-.008
Provision of Counseling Services to help (% agree):					
Continue education	60.5	59.0	-1.5	.98	-.025
Find employment	27.0	46.0	19.0*	1.70	.533

* $p < .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.13. CHANGES IN PROFILE VARIABLES FOR THOSE PLANNING HOUSEWIFE OCCUPATION

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	96.3	99.0	2.7*	1.03	.028
SES (mean)	-.32	-.31	.01		
Race					
% Hispanic	.7	4.4	3.7*	6.29	1.838
% Black	5.4	4.8	-.6	.89	-.118
% White	93.9	90.8	-3.1	.97	-.034
Aptitude (mean)	47.07	47.57	.50		
Curriculum					
% General	53.1	49.1	-4.0	.92	-.078
% Academic	16.1	20.3	4.2	1.26	.232
% Vocational	30.9	30.6	-.3	.99	-.010
Grades (% A's and B's)	23.5	29.8	6.3	1.27	.238
Math courses (mean)	2.81	3.23	.42*		
English courses (mean)	5.90	5.81	-.09		
Science courses (mean)	2.82	2.62	-.20		
Foreign Language courses (mean)	1.68	1.15	-.53*		
Self-concept (mean)	-.10	-.17	-.07		
Locus of control (mean)	-.05	-.06	-.01		
Influence of (% "very important")					
Parents	34.7	20.8	-13.9*	.60	-.512
Counselors	1.8	6.7	4.9*	3.72	1.314
Teachers	3.8	8.0	4.2	2.11	.744
Importance of (% "very important")					
Money	6.0	14.9	8.9*	2.48	.910
Success in work	68.3	66.4	-1.9	.97	-.028
Provision of Counseling Services to help (% agree):					
Continue education	40.3	58.7	18.4*	1.46	.376
Find employment	38.0	47.4	9.4*	1.25	.221

* $p < .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.14. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING PREPROFESSIONAL IN COLLEGE

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	36.3	49.3	13.0*	1.36	.306
SES (mean)	.48	.41	-.07		
Race					
% Hispanic	2.0	5.4	3.4*	2.7	.993
% Black	6.2	10.4	4.2*	1.68	.517
% White	91.8	84.3	-7.5*	.92	-.085
Aptitude (mean)	58.43	57.23	-1.20*		
Curriculum					
% General	11.3	16.2	4.9*	1.43	.360
% Academic	86.8	79.1	-7.7*	.91	-.093
% Vocational	1.9	4.6	2.7*	2.42	.884
Grades (% A's and B's)	52.2	64.2	12.0*	1.23	.207
Math courses (mean)	5.04	5.19	.15		
English courses (mean)	6.19	6.06	-.13*		
Science courses (mean)	4.85	4.93	.08		
Foreign Language courses (mean)	3.86	2.97	-.89*		
Self-concept (mean)	.19	.29	.10*		
Locus of control (mean)	.27	.35	.08*		
Influence of (% "very important")					
Parents	49.5	44.5	-5.0	.90	-.106
Counselors	9.7	10.6	.9	1.09	.089
Teachers	10.2	16.0	5.8*	1.57	.450
Importance of (% "very important")					
Money	18.5	34.0	15.5*	1.84	.609
Success in work	87.9	94.6	6.7*	1.08	.073
Provision of Counseling Services to help (% agree):					
Continue education	59.1	65.3	6.2*	1.10	.100
Find employment	14.8	29.9	15.1*	2.02	.703

* $p < .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.15. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING HUMANITIES/ARTS IN COLLEGE

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	62.5	60.0	-2.5	.96	-.040
SES (mean)	.29	.22	-.07*		
Race					
% Hispanic	3.6	4.2	.6	1.17	.154
% Black	5.7	10.7	5.0*	1.88	.630
% White	90.7	85.1	-5.6*	.94	-.064
Aptitude (mean)	55.48	53.57	-1.91*		
Curriculum					
% General	24.9	31.6	6.7*	1.27	.238
% Academic	70.1	59.9	-10.2*	.85	-.157
% Vocational	4.6	8.6	4.0*	1.87	.626
Grades (% A's and B's)	46.9	43.2	-3.7	.92	-.082
Math courses (mean)	4.07	4.15	.08		
English courses (mean)	6.18	6.10	-.08		
Science courses (mean)	3.50	3.53	.03		
Foreign Language courses (mean)	3.58	2.62	-.96*		
Self-concept (mean)	.04	.08	.04		
Locus of control (mean)	.18	.19	.01		
Influence of (% "very important")					
Parents	44.6	33.1	-11.5*	.74	-.300
Counselors	8.6	10.7	2.1	1.24	.218
Teachers	17.1	22.8	5.7*	1.33	.290
Importance of (% "very important")					
Money	13.2	28.0	14.8*	2.12	.752
Success in work	81.2	89.3	8.1*	1.10	.095
Provision of Counseling Services to help (% agree):					
Continue education	57.7	64.3	6.6*	1.11	.108
Find employment	19.6	35.2	15.6*	1.80	.586

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.16. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING EDUCATION IN COLLEGE

VARIABLE	COHORT 1972	 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	72.0	76.5	4.5	1.06	.061
SES (mean)	.16	.09	-.07		
Race					
% Hispanic	2.8	4.9	2.1	1.75	.560
% Black	5.3	7.1	1.8	1.34	.292
% White	91.9	88.0	-3.9*	.96	-.043
Aptitude (mean)	53.64	51.36	-2.28*		
Curriculum					
% General	22.6	39.5	16.9*	1.75	.558
% Academic	71.4	52.1	-19.3*	.73	-.315
% Vocational	6.0	8.4	2.4	1.40	.336
Grades (% A's and B's)	37.2	42.3	5.1	1.14	.128
Math courses (mean)	4.30	4.16	-.14		
English courses (mean)	6.14	6.05	-.09		
Science courses (mean)	3.90	3.69	-.21		
Foreign Language courses (mean)	3.53	2.07	-1.46*		
Self-concept (mean)	.04	.01	-.03		
Locus of control (mean)	.19	.15	-.04		
Influence of (% "very important")					
Parents	54.8	39.4	-15.4*	.72	-.330
Counselors	13.4	14.5	1.1	1.08	.079
Teachers	19.4	23.6	4.2	1.22	.196
Importance of (% "very important")					
Money	12.4	18.1	5.7*	1.46	.378
Success in work	87.8	90.8	3.0	1.03	.034
Provision of Counseling Services to help (% agree):					
Continue education	68.1	69.4	1.3	1.02	.019
Find employment	25.4	41.6	16.2*	1.64	.493

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.17. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING BUSINESS IN COLLEGE

VARIABLE	COHORT 1972	1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	36.3	56.7	20.4*	1.56	.446
SES (mean)	.16	.15	-.01		
Race					
% Hispanic	3.9	5.4	1.5	1.38	.325
% Black	7.9	11.4	3.5*	1.44	.367
% White	88.2	83.2	-5.0*	.94	-.060
Aptitude (mean)	52.95	51.91	-1.04*		
Curriculum					
% General	25.6	29.3	3.7*	1.14	.135
% Academic	53.5	48.1	-5.4*	.90	-.106
% Vocational	21.0	22.6	1.6	1.08	.073
Grades (% A's and B's)	33.6	41.9	8.3*	1.25	.221
Math courses (mean)	4.31	4.43	.12		
English courses (mean)	6.04	5.97	-.07		
Science courses (mean)	3.67	3.42	-.25*		
Foreign Language courses (mean)	2.96	2.01	-.95*		
Self-concept (mean)	.04	.07	.03		
Locus of control (mean)	.12	.13	.01		
Influence of (% "very important")					
Parents	48.5	36.8	-11.7*	.76	-.276
Counselors	10.2	11.4	1.2	1.12	.111
Teachers	8.4	14.5	6.1*	1.73	.546
Importance of (% "very important")					
Money	21.4	34.7	13.3*	1.62	.483
Success in work	88.7	92.8	4.1*	1.05	.045
Provision of Counseling Services to help (% agree):					
Continue education	64.4	65.6	1.2*	1.02	.018
Find employment	28.6	41.5	12.5*	1.44	.363

* $p \leq .01$

[1] Ratios and natural logs not provided for variables with means.

TABLE 3.18. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING SOCIAL SCIENCE IN COLLEGE

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	50.5	71.9	21.4*	1.42	.353
SES (mean)	.25	.30	.05		
Race					
% Hispanic	2.8	6.3	3.5*	2.25	.811
% Black	7.0	11.1	4.1*	1.59	.461
% White	90.3	82.6	-7.7*	.91	-.089
Aptitude (mean)	55.55	54.68	-.87		
Curriculum					
% General	23.5	24.0	.5	1.02	.021
% Academic	72.1	70.3	-1.8	.98	-.025
% Vocational	4.4	5.7	1.3	1.30	.259
Grades (% A's and B's)	37.0	45.7	8.7*	1.24	.211
Math courses (mean)	4.28	4.54	.26*		
English courses (mean)	6.09	6.14	.05		
Science courses (mean)	3.92	4.03	.11		
Foreign Language courses (mean)	3.48	2.75	-.73*		
Self-concept (mean)	.05	.05	.00		
Locus of control (mean)	.19	.27	.08*		
Influence of (% "very important")					
Parents	43.5	39.0	-4.5	.90	-.109
Counselors	6.9	13.8	6.9*	2.00	.693
Teachers	8.9	18.2	9.3*	2.04	.715
Importance of (% "very important")					
Money	13.3	26.3	13.0*	1.98	.682
Success in work	79.1	89.6	10.5*	1.13	.125
Provision of Counseling Services to help (% agree):					
Continue education	57.3	65.1	7.8*	1.14	.128
Find employment	15.8	31.7	15.9*	2.01	.696

* $p \leq .01$

[1] Ratios and natural logs not provided for variables with means.

TABLE 3.19. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING BIOLOGY/PHYSICAL SCIENCE/MATHEMATICS IN COLLEGE

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	36.3	39.8	3.5	1.10	.092
SES (mean)	.31	.33	.02		
Race					
% Hispanic	.90	4.2	3.3*	4.67	1.540
% Black	4.9	6.7	1.8	1.37	.313
% White	94.3	89.1	-5.2*	.94	-.057
Aptitude (mean)	57.83	57.43	-.40		
Curriculum					
% General	13.5	21.6	8.1*	1.60	.470
% Academic	84.5	73.0	-11.5*	.86	-.146
% Vocational	2.0	5.5	3.5*	2.75	1.010
Grades (% A's and B's)	54.7	57.9	3.2	1.06	.057
Math courses (mean)	5.36	5.37	.01		
English courses (mean)	6.04	6.03	-.01		
Science courses (mean)	5.25	5.29	.04		
Foreign Language courses (mean)	3.54	2.76	-.78*		
Self-concept (mean)	.10	.08	-.02		
Locus of control (mean)	.24	.22	-.02		
Influence of (% "very important")					
Parents	50.7	36.4	-14.3*	.72	-.331
Counselors	13.3	10.0	-3.3	.75	-.285
Teachers	12.2	15.9	3.7	1.30	.265
Importance of (% "very important")					
Money	15.4	23.3	7.9*	1.51	.414
Success in work	84.2	84.8	.6	1.01	.007
Provision of Counseling Services to help (% agree):					
Continue education	63.2	63.8	.6	1.01	.009
Find employment	20.5	32.2	11.7*	1.57	.452

* $p \leq .01$

[1] Ratios and natural logs not provided for variables with means.

TABLE 3.20. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING COMPUTER/ENGINEERING/ARCHITECTURE IN COLLEGE

VARIABLE	COHORT 1972	COHORT 1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	7.9	23.9	16.0*	3.03	1.107
SES (mean)	.20	.23	.03		
Race					
% Hispanic	2.5	5.6	3.1*	2.24	.806
% Black	5.0	12.2	7.2*	2.44	.899
% White	92.4	82.2	-10.2*	.89	-.117
Aptitude (mean)	55.72	55.76	.04		
Curriculum					
% General	19.3	20.9	1.6	1.08	.077
% Academic	74.0	67.0	-7.0*	.91	-.099
% Vocational	6.7	12.2	5.5*	1.82	.599
Grades (% A's and B's)	38.7	52.4	13.7*	1.35	.303
Math courses (mean)	5.30	5.46	.16*		
English courses (mean)	5.97	6.00	.03		
Science courses (mean)	4.61	4.62	.01		
Foreign Language courses (mean)	2.84	2.17	-.67*		
Self-concept (mean)	.12	.17	.05		
Locus of control (mean)	.15	.18	.03		
Influence of (% "very important")					
Parents	49.4	36.6	-12.8*	.74	-.300
Counselors	9.1	13.2	4.1*	1.45	.372
Teachers	8.8	16.2	7.4*	1.84	.610
Importance of (% "very important")					
Money	24.9	34.0	9.1*	1.37	.311
Success in work	88.4	92.3	3.9*	1.04	.043
Provision of Counseling Services to help (% agree):					
Continue education	66.4	66.6	.2	1.00	.003
Find employment	26.8	35.3	8.5*	1.32	.275

* $p \leq .01$

[1] Ratios and natural logs not provided for variables with means.

TABLE 3.21. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING AGRICULTURE/HOME ECONOMICS/VOCATIONAL IN COLLEGE

VARIABLE	COHORT 1972	1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	37.6	43.8	6.2*	1.16	.153
SES (mean)	.06	.01	-.05		
Race					
% Hispanic	2.9	6.4	3.5	2.2	.792
% Black	4.3	8.0	3.7*	1.86	.621
% White	92.9	85.7	-7.2*	.92	-.081
Aptitude (mean)	52.60	50.13	-2.47*		
Curriculum					
% General	30.1	37.0	6.9*	1.23	.206
% Academic	50.3	32.8	-17.5*	.65	-.428
% Vocational	19.5	30.2	10.7*	1.55	.437
Grades (% A's and B's)	25.3	31.2	5.9*	1.23	.210
Math courses (mean)	3.99	3.87	-.12		
English courses (mean)	5.98	5.86	-.12		
Science courses (mean)	3.74	3.43	-.31*		
Foreign Language courses (mean)	2.63	1.31	-1.32*		
Self-concept (mean)	.02	.03	.01		
Locus of control (mean)	.02	.03	.01		
Influence of (% "very important")					
Parents	43.1	33.1	-10.0*	.77	-.264
Counselors	9.3	11.9	2.6	1.28	.247
Teachers	10.1	15.3	5.2*	1.51	.415
Importance of (% "very important")					
Money	14.5	27.5	13.0*	1.90	.640
Success in work	83.2	89.1	5.9*	1.07	.069
Provision of Counseling Services to help (% agree):					
Continue education	58.7	68.1	9.4*	1.16	.149
Find employment	27.8	47.0	19.2*	1.69	.525

* $p < .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.22. CHANGES IN PROFILE VARIABLES FOR THOSE STUDYING HEALTH IN COLLEGE

VARIABLE	COHORT 1972	1980	1980-1972 DIFFERENCE	RATIO[1] 1980:1972	NAT.LOG OF RATIO
Sex (% female)	83.7	88.3	4.6*	1.05	.054
SES (mean)	.15	.02	-.13*		
Race					
% Hispanic	3.0	5.2	2.2	1.73	.550
% Black	7.1	11.6	4.5*	1.63	.491
% White	89.9	83.2	-6.7*	.93	-.077
Aptitude (mean)	53.46	51.47	-1.99*		
Curriculum					
% General	24.0	27.9	3.9	1.16	.151
% Academic	69.1	57.5	-11.6*	.83	-.184
% Vocational	6.9	14.6	7.7*	2.12	.750
Grades (% A's and B's)	39.3	46.8	7.5*	1.19	.175
Math courses (mean)	4.21	4.48	.27*		
English courses (mean)	6.04	6.01	-.03		
Science courses (mean)	4.44	4.52	.08		
Foreign Language courses (mean)	3.39	2.18	-1.21*		
Self-concept (mean)	.05	.00	-.05		
Locus of control (mean)	.19	.14	-.05		
Influence of (% "very important")					
Parents	50.3	33.9	-16.4*	.67	-.395
Counselors	11.6	13.5	1.9	1.16	.152
Teachers	8.4	12.8	4.4*	1.52	.421
Importance of (% "very important")					
Money	11.4	20.9	9.5*	1.83	.606
Success in work	89.4	94.5	5.1*	1.06	.055
Provision of Counseling Services to help (% agree):					
Continue education	63.7	66.7	3.0	1.05	.046
Find employment	24.8	39.7	14.9*	1.60	.471

* $p \leq .01$

1. Ratios and natural logs not provided for variables with means.

TABLE 3.23. REGRESSION ANALYSIS OF THE PREDICTOR VARIABLES WITH SELECTING EACH PLANNED OCCUPATION

	Profess 2			Profess 1			Technical			Teacher			Mgr/Prop		
	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta
Sex	-.028	.00	-.04	.047	.00	.05	-.034	.00	-.06	.064	.00	.12	-.050	.00	-.09
Curric	.059	.00	.08	.085	.00	.09	.001	.77	.00	.056	.00	.10	-.011	.00	-.02
Hispanic	.060	.00	.04	.045	.00	.02	.010	.13	.01	.007	.26	.01	-.005	.45	-.00
Black	.071	.00	.06	.100	.00	.07	.013	.01	.01	-.007	.15	-.01	.014	.00	.02
Grades	.021	.00	.05	.005	.21	.01	-.001	.50	.00	.006	.00	.02	-.003	.12	-.01
Aptitude	.005	.00	.13	.005	.00	.10	.001	.00	.04	-.001	.11	-.01	-.001	.00	-.02
SES	.030	.00	.08	.026	.00	.04	-.012	.00	-.03	.004	.06	.01	.032	.00	.08
Concept	.013	.00	.03	-.006	.05	-.01	-.004	.03	-.01	-.001	.52	.00	.007	.00	.02
WrkCouns	-.017	.00	-.03	-.030	.00	-.03	.006	.03	.01	-.004	.13	-.01	-.004	.13	-.01
TchrInfl	.007	.13	.01	.026	.00	.02	-.004	.25	-.01	.071	.00	.09	-.018	.00	-.02
WorkImp	.003	.53	.00	.011	.08	.01	.017	.00	.02	-.006	.11	-.01	.014	.00	.02
Math	-.001	.48	.00	.004	.00	.02	.008	.00	.06	.002	.08	.01	-.001	.70	.00
Science	.021	.00	.11	.006	.00	.02	.001	.35	.01	-.004	.00	-.03	-.005	.00	-.03
FrnLang	.006	.00	.04	.002	.12	.01	-.003	.00	-.02	.003	.00	.03	.002	.00	.02
Year	.028	.00	.04	.014	.00	.02	.024	.00	.04	-.069	.00	-.13	.075	.00	.13
YearSex	.082	.00	.06	.066	.00	.04	-.029	.00	-.03	-.041	.00	-.04	.002	.75	.00
YearBlack	-.011	.34	.00	-.048	.00	-.02	.034	.00	.02	-.048	.00	-.03	.007	.44	.00
Year Aptitude	.002	.00	.03	.003	.00	.03	.000	.21	.01	-.004	.00	-.06	.000	.58	.00
R^2		.121			.047			.014			.064			.032	

TABLE 3.23.(continued) REGRESSION ANALYSIS OF THE PREDICTOR VARIABLES WITH SELECTING EACH PLANNED OCCUPATION

	Craft/Oper			Cler/Sales			Service			Farm/Lab			Military			Housewife		
	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta
Sex	-.200	.00	-.30	.195	.00	.27	.050	.00	.10	-.064	.00	-.16	-.023	.00	-.08	.044	.00	.14
Curric	-.055	.00	-.08	-.088	.00	-.12	-.015	.00	-.03	-.013	.00	-.03	-.008	.00	-.03	-.006	.00	-.02
Hispanic	-.041	.00	-.03	-.012	.12	-.01	-.013	.03	-.01	-.028	.00	-.03	.006	.08	.01	-.021	.00	-.03
Black	-.067	.00	-.06	-.030	.00	-.03	-.038	.00	-.04	-.045	.00	-.07	.017	.00	.04	-.025	.00	-.05
Grades	-.028	.00	-.06	.026	.00	.05	-.014	.00	-.04	-.006	.00	-.02	-.003	.02	-.01	-.002	.15	-.01
Aptitude	-.003	.00	-.09	-.003	.00	-.06	-.002	.00	-.07	-.001	.00	-.06	.000	.07	.01	.000	.00	-.02
SES	-.031	.00	-.07	-.022	.00	-.04	-.008	.00	-.02	-.013	.00	-.05	-.005	.00	-.02	-.008	.00	-.04
Concept	.003	.15	.01	-.013	.00	-.03	.000	.95	.00	-.002	.09	-.01	.001	.22	.01	.001	.34	.00
WrkCouns	.006	.05	.01	.050	.00	.07	-.003	.18	-.01	.000	.85	.00	-.001	.35	.00	.001	.49	.00
TchrInfl	-.012	.01	-.01	-.023	.00	-.02	-.021	.00	-.03	-.009	.00	-.02	-.006	.00	-.02	-.011	.00	-.03
WorkImp	-.001	.90	.00	.001	.87	.00	.005	.18	.01	-.007	.01	-.01	-.001	.73	.00	-.037	.00	-.09
Math	-.004	.00	-.02	.000	.96	.00	-.005	.00	-.04	-.003	.00	-.03	.001	.38	.01	-.001	.13	-.01
Science	-.007	.00	-.04	-.013	.00	-.07	.002	.05	.01	.000	.82	.00	.001	.28	.01	-.001	.08	-.01
FrnLang	-.007	.00	-.05	-.005	.00	-.03	-.002	.01	-.02	-.002	.00	-.02	.001	.03	.01	-.001	.00	-.02
Year	-.017	.00	-.03	-.065	.00	-.09	-.027	.00	-.05	.009	.00	.02	.007	.00	.03	.015	.00	.05
YearSex	-.018	.00	-.01	-.054	.00	-.04	-.023	.00	-.03	-.018	.00	-.02	-.004	.14	-.01	.040	.00	.07
YearBlack	-.014	.19	-.01	.055	.00	.02	.027	.00	.02	-.010	.13	-.01	.030	.00	.03	-.020	.00	-.02
Year Aptitude	.000	.22	-.01	.000	.26	-.01	.001	.05	.01	-.001	.00	-.02	.000	.79	.00	.000	.06	-.01
R^2		.160			.154			.035			.047			.011			.044	

TABLE 3.24. REGRESSION ANALYSIS OF THE PREDICTOR VARIABLES WITH SELECTING EACH FIELD OF STUDY

	Preprof			Human/Art			Education			Business		
	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta
Sex	-.032	.00	-.05	.025	.00	.04	.079	.00	.14	-.043	.00	-.06
Curric	.026	.00	.04	.028	.00	.04	.018	.00	.03	-.061	.00	-.08
Black	.059	.00	.05	.017	.07	.01	-.060	.00	-.06	.005	.64	.00
Grades	.016	.00	.03	-.004	.35	-.01	-.008	.02	-.02	.016	.00	.03
Aptitude	.003	.00	.08	.003	.00	.06	-.003	.00	-.07	-.003	.00	-.07
SES	.028	.00	.07	.015	.00	.03	-.010	.00	-.02	.006	.11	.02
Concept	.020	.00	.05	-.007	.04	-.01	-.003	.33	-.01	-.004	.31	-.01
TchrInfl	-.009	.14	-.01	.068	.00	.07	.054	.00	.06	-.046	.00	-.04
Math	-.002	.12	-.01	-.021	.00	-.10	-.002	.26	-.01	.011	.00	.05
English	-.003	.24	-.01	.032	.00	.08	.007	.00	.02	.004	.22	.01
Science	.013	.00	.08	-.026	.00	-.14	-.002	.21	-.01	-.028	.00	-.14
Frnlang	.005	.00	.04	.012	.00	.07	.002	.15	.01	-.002	.09	-.01
Year	-.028	.00	-.05	.006	.24	.01	-.058	.00	-.10	.090	.00	.12
YearSex	.005	.00	.04	-.039	.00	-.03	-.053	.00	-.05	.086	.00	.06
YearAptitude	-.003	.00	-.04	-.001	.14	-.01	.001	.21	.01	-.000	.82	-.00
R^2		.056			.047			.043			.058	

TABLE 3.24.(continued) REGRESSION ANALYSIS OF THE PREDICTOR VARIABLES WITH SELECTING EACH FIELD OF STUDY

	SocSci			Bio/PhySci/Math			Com/Engin/Arch			Agri/HomeEc/Voc			Health		
	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta	b	sig	beta
Sex	.026	.00	.04	-.022	.00	-.04	-.150	.00	-.23	-.042	.00	-.08	.158	.00	.26
Curric	.028	.00	.05	.001	.83	.00	.000	.99	-.00	-.047	.00	-.08	.008	.13	.01
Black	.030	.00	.03	.003	.63	.00	.036	.00	.10	-.039	.00	-.06	-.030	.00	-.03
Grades	-.019	.00	-.04	.010	.00	.03	.014	.00	.03	-.013	.00	-.04	-.010	.00	-.02
Aptitude	.002	.00	.06	.002	.00	.05	.002	.00	.04	-.002	.00	-.04	-.004	.00	-.09
SES	.006	.07	.02	-.001	.83	-.00	-.011	.00	-.02	-.016	.00	-.04	-.017	.00	-.04
Concept	-.003	.24	-.01	-.005	.05	-.01	.003	.36	.01	-.002	.57	-.00	.001	.67	.00
TchrInfl	-.009	.11	-.01	.003	.58	.00	-.014	.02	-.02	-.009	.10	-.01	-.037	.00	-.04
Math	-.008	.00	-.05	.006	.00	.04	.028	.00	.15	-.008	.00	-.05	-.005	.00	-.03
English	.009	.00	.03	-.015	.00	-.05	-.021	.00	-.05	-.001	.78	-.00	-.011	.00	-.03
Science	-.006	.00	-.03	.019	.00	.14	.002	.12	.01	-.001	.47	-.01	.029	.00	.17
Frnlang	.004	.00	.03	-.001	.47	-.01	-.011	.00	-.07	-.007	.00	-.05	-.003	.01	-.02
Year	-.025	.00	-.04	-.017	.00	-.03	.072	.00	.11	-.005	.22	-.01	-.036	.00	-.06
YearSex	.055	.00	.05	.006	.36	.01	-.058	.00	-.04	-.006	.44	-.01	-.045	.00	-.04
Year Aptitude	.001	.15	.01	-.001	.12	-.01	.004	.00	.05	-.001	.02	-.02	.000	.67	.00
R^2		.017			.041			.116			.042			.088	

TABLE 3.25. PREDICTED VALUES FOR SELECTING EACH OCCUPATION, USING INTERACTION TERMS

Interation Term	Occupation										
	Prof 2	Prof 1	Tech	Tchr	Mgr/Prop	Craft/Oper	Cler/Sales	Service	Farm/Lab	Milit	Hswfe
YearSex	*	*	*	*		*	*	*	*		*
male 1972	.134	.257	.072	.053	.066	.219	.054	.047	.061	.028	.004
male 1980	.132	.239	.108	.030	.140	.211	.014	.031	.079	.036	-.001
female 1972	.069	.265	.054	.140	.014	.029	.279	.110	.007	.007	.026
female 1980	.140	.315	.062	.062	.090	.003	.185	.071	.015	.011	.061
YearBlack		*	*	*			*	*		*	*
black 1972	.170	.366	.057	.122	.049	.069	.114	.031	.002	.015	.004
black 1980	.191	.341	.110	.037	.130	.040	.097	.027	.002	.048	.001
white 1972	.093	.239	.073	.102	.039	.128	.175	.084	.041	.015	.017
white 1980	.125	.262	.082	.037	.113	.113	.103	.053	.052	.018	.035
YearAptitude	*	*		*							
1972	.106	.260	.063	.104	.040	.122	.169	.079	.034	.017	.015
1980	.136	.287	.085	.034	.115	.105	.102	.051	.043	.023	.030

* $p \leq .01$ for interaction term

TABLE 3.26 PREDICTED VALUES FOR SELECTING EACH FIELD, USING INTERACTION TERMS

	Field								
Interaction Term	Preprofess	Human/Art	Educ	Bus	SocSci	Bio/PhySci/ Math	Comp/Eng/ Arch	Agric/HmEc/ Voc	Health
YearSex	*	*	*	*	*		*		*
male 1972	.134	.126	.070	.181	.097	.090	.140	.200	.038
male 1980	.104	.152	.039	.182	.044	.070	.242	.198	.025
female 1972	.100	.173	.179	.074	.092	.064	.023	.204	.221
female 1980	.074	.160	.117	.221	.094	.050	.038	.196	.163
YearAptitude	*						*		
1972	.117	.150	.125	.134	.094	.077	.081	.181	.131
1980	.089	.156	.067	.223	.069	.060	.153	.176	.095

* p≤..01 for interaction term

TABLE 4.1. SUCCESSFUL PURSUIT OF PLANNED OCCUPATION AND INTENDED FIELD OF STUDY (PERCENT)

OCCUPATION	% SUCCESSFUL	FIELD	% SUCCESSFUL
Profess 2	21.4	Preprofess	17.9
Profess 1	27.9	Human/Art	34.3
Technical	27.0	Education	34.8
Teacher	29.3	Business	32.9
Mgr/Prop	37.7	SocSci	23.2
Craft/Oper	84.5	Bio/PhySci/Math	20.9
Cler/Sales	83.0	Comp/Eng/Arch	26.4
Service	53.7	Agri/HmEc/Vocat	22.9
Farm/Lab	57.6	Health	33.2
Military	58.3		
Housewife	96.0		

TABLE 4.2. BIVARIATE ANALYSIS OF PREDICTORS OF SUCCESSFUL PURSUIT OF OCCUPATION

VARIABLE	Profess 2 succ	Profess 2 unsucc	Profess 1 succ	Profess 1 unsucc	Technical succ	Technical unsucc	Teacher succ	Teacher unsucc
Sex (% female)	29.7	34.6	55.1	50.8	31.9	68.1	80.4	69.8*
Race								
% Hispanic	2.5	1.8	3.0	3.3	1.5	5.0*	1.2	4.2*
% black	6.0	7.2	6.5	11.7*	5.2	8.5	4.7	11.2*
% white	91.5	91.0	90.5	84.9*	93.3	86.5	94.2	84.1*
Concept (mean)	.28	.14*	.09	-.02*	.04	-.01	.04	.05
Locus (mean)	.32	.23	.19	.05*	.19	.02*	.26	.14*
SES (mean)	.54	.40*	.30	.08*	.05	-.01	.21	.13
EducAsp (mean)	5.67	5.35*	4.78	4.45*	3.97	3.94	4.93	4.89
FathAsp (mean)	5.48	5.22*	4.75	4.44*	4.12	4.10	4.92	4.81
MothAsp (mean)	5.61	5.25*	4.81	4.45*	4.11	4.14	4.98	4.84*
ParInfl (% "great deal")	50.1	49.7	45.3	42.5	54.8	39.8*	57.4	53.7
Curriculum								
% General	9.7	18.3*	21.1	32.8*	20.7	30.4	19.7	25.7*
% Academic	89.2	77.0*	70.3	52.6*	59.5	49.4	76.2	66.8*
% Vocational	1.1	4.7*	8.5	14.7*	19.7	20.2	4.1	7.5*
Aptitude (mean)	60.51	56.73*	56.28	52.26*	54.25	51.83*	54.48	53.39
H.S. GPA (mean)	3.54	3.08*	3.16	2.82*	3.05	2.76*	3.24	3.02*
Math (mean)	5.44	4.74*	4.60	3.87*	4.22	4.43	4.62	4.01*
English (mean)	6.19	6.09	6.07	5.97	5.96	5.94	6.18	6.06
Science (mean)	5.25	4.52*	4.27	3.65*	4.22	3.74*	4.01	3.55*
SocStud (mean)	5.25	5.23	5.23	5.24	5.04	5.21	5.37	5.28
FrnLang (mean)	3.95	3.22*	3.04	2.27*	2.56	1.86*	3.33	2.88*
RemRdg (% Yes)	1.6	2.9	1.6	4.3*	3.0	4.4	1.2	5.0*
RemMth (% Yes)	.4	1.4	1.8	3.4	1.1	2.0	.7	2.3
TchrInfl (% "great deal")	10.9	10.1	13.6	9.6*	5.7	7.9	27.1	22.3
CounInfl (% "great deal")	9.3	11.0	9.0	10.0	7.3	9.7	15.7	15.3
WrkCouns (% agree)	13.5	17.7	21.7	27.3*	41.3	35.6	24.6	26.4
EdCouns (% agree)	52.5	58.3	61.5	60.6	71.0	59.8	67.4	71.2
CollGPA (mean)	3.27	2.92*	3.05	2.90*	3.16	2.93*	3.16	2.92*
EarlyMarr (% Yes)	18.4	32.4*	27.7	42.6*	42.9	43.4	31.2	39.5*
EarlyChld (% Yes)	1.4	11.3*	7.8	21.9*	14.8	21.0	6.5	20.2*
EarlyWrk (mean)	1.49	2.24*	2.04	2.52*	2.61	2.62	1.75	2.27*

* $p \leq .01$

TABLE 4.2. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SUCCESSFUL PURSUIT OF OCCUPATION

VARIABLE	Mgr/Prop		Craft/Oper		Cler/Sales		Service	
	succ	unsucc	succ	unsucc	succ	unsucc	succ	unsucc
Sex (% female)	20.1	26.8	6.9	46.8*	94.5	78.9*	74.9	66.4*
Race								
% Hispanic	3.3	6.1	4.6	5.8	3.9	3.6	2.7	7.1*
% black	4.0	7.8	8.4	15.4	8.6	14.5*	7.7	6.6
% white	92.7	86.2	87.0	78.8	87.4	81.9	89.6	86.4
Concept (mean)	.13	.08	-.02	-.05	-.07	-.14	-.09	-.02
Locus (mean)	.17	-.04*	-.28	-.19	.02	-.25*	-.05	-.11
SES (mean)	.32	.09*	-.26	-.30	-.21	-.36*	-.19	-.09
EducAsp (mean)	4.29	3.99	2.82	2.98	2.91	2.79	3.31	3.36
FathAsp (mean)	4.45	4.16*	3.29	3.54*	3.44	3.37	3.67	3.70
MothAsp (mean)	4.59	4.18*	3.37	3.63*	3.42	3.38	3.63	3.17
ParInfl (% "great deal")	49.8	41.7	38.1	33.5	40.0	39.3	41.4	36.4
Curriculum								
% General	27.0	29.8	43.0	47.4	25.8	30.6	48.8	45.4
% Academic	47.1	37.5	14.7	16.8	14.9	14.2	21.4	25.4
% Vocational	26.0	32.7	42.3	35.8	59.4	55.2	29.8	29.2
Aptitude (mean)	52.29	50.82	46.65	46.48	48.43	46.46*	47.35	46.99
H.S. GPA (mean)	2.73	2.68	2.32	2.44	2.87	2.63*	2.59	2.61
Math (mean)	3.88	3.42	3.05	2.91	2.69	2.56	2.74	2.81
English (mean)	5.98	6.02	5.85	5.74	5.90	5.83	5.77	5.79
Science (mean)	3.45	3.27	2.74	2.67	2.35	2.57	2.81	2.87
SocStud (mean)	5.30	5.16	5.21	4.97	5.03	5.21	5.19	5.21
FrnLang (mean)	1.93	1.72	.68	1.07*	1.43	1.14	1.34	1.39
RemRdg (% Yes)	5.6	7.7	10.7	12.6	4.7	7.7	6.6	12.6*
RemMth (% Yes)	3.9	5.9	6.7	10.3	3.1	5.6	4.3	9.7*
TchrInfl (% "great deal")	5.0	11.9*	8.2	9.8	10.6	6.6	6.8	7.7
CounInfl (% "great deal")	6.6	11.6	6.5	7.9	7.2	7.0	9.1	6.6
WrkCouns (% agree)	24.4	24.6	40.0	45.4	49.8	49.4	36.8	37.3
EdCouns (% agree)	57.7	54.1	51.4	60.6	56.1	56.1	59.1	53.2
CollGPA (mean)	2.83	2.79	2.95	2.87*	3.09	2.82	3.01	2.95
EarlyMarr (% Yes)	45.4	41.0	53.1	53.3	63.8	67.7	64.6	62.9
EarlyChld (% Yes)	14.7	22.9	32.3	33.9	32.8	52.7*	36.3	36.3
EarlyWrk (mean)	3.01	2.69*	3.46	2.77*	3.12	2.01*	2.84	2.76

* $p \leq .01$

TABLE 4.2. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SUCCESSFUL PURSUIT OF OCCUPATION

VARIABLE	Farm/Lab		Military	
	succ	unsucc	succ	unsucc
Sex (% female)	7.1	15.63	9.7	36.1*
Race				
% Hispanic	3.8	1.6	1.6	6.1
% black	2.7	2.7	6.0	12.1
% white	93.5	95.8	92.4	81:9
Concept (mean)	-.05	-.18	.16	-.03
Locus (mean)	-.22	-.38	.14	.05
SES (mean)	-.24	-.22	.07	-.07
EducAsp (mean)	2.96	3.04	4.16	3.51
FathAsp (mean)	3.56	3.35	4.27	4.00
MothAsp (mean)	3.60	3.47	4.28	4.21
ParInfl (% "great deal")	37.2	31.7	47.5	51.5
Curriculum				
% General	43.2	55.2	34.8	38.2
% Academic	22.0	15.9	45.9	39.0
% Vocational	34.8	28.9	19.3	22.8
Aptitude (mean)	46.96	46.83	52.37	49.61
H.S. GPA (mean)	2.51	2.20*	2.76	2.46
Math (mean)	3.04	2.87	4.39	3.28*
English (mean)	5.80	5.71	6.12	5.71
Science (mean)	3.14	2.98	3.99	3.33
SocStud (mean)	5.26	5.31	5.41	5.32
FrnLang (mean)	.65	1.03	2.27	1.59
RemRdg (% Yes)	7.9	11.9	11.0	15.8
RemMth (% Yes)	5.0	7.9	6.0	13.1
TchrInfl (% "great deal")	5.8	4.8	11.5	11.7
CounInfl (% "great deal")	2.8	4.1	12.5	7.8
WrkCouns (% agree)	32.5	34.9	24.5	33.5
EdCouns (% agree)	55.0	36.1*	56.5	64.5
CollGPA (mean)	2.86	2.85	3.06	2.76
EarlyMarr (% Yes)	54.8	58.8	44.0	46.8
EarlyChld (% Yes)	29.0	41.7	24.6	34.1
EarlyWrk (mean)	3.41	3.34	2.45	2.66

* $p \leq .01$

TABLE 4.3. BIVARIATE ANALYSIS OF PREDICTORS OF SUCCESSFUL PURSUIT OF FIELD

VARIABLE	Preprof		Human/Art		Educ		Business	
	succ	unsucc	succ	unsucc	succ	unsucc	succ	unsucc
Sex (% female)	32.7	36.2	66.0	60.3	83.3	67.3*	23.6	43.2*
Race								
% Hispanic	4.1	2.1	1.0	5.4*	.2	3.7*	2.3	4.8*
% black	6.4	5.2	3.3	6.8*	3.6	6.3*	4.9	9.9*
% white	89.4	92.7	95.7	87.8*	96.2	90.0*	92.8	85.3*
Concept (mean)	.32	.19	.08	.02	-.02	.04	.06	.04
Locus (mean)	.26	.29	.23	.15	.30	.14	.18	.08*
SES (mean)	.66	.50	.51	.23*	.29	.17	.37	.13*
EducAsp (mean)	5.79	5.49*	5.08	4.87*	5.02	4.87*	4.93	4.56*
FathAsp (mean)	5.58	5.38	5.00	4.79*	4.98	4.82*	4.83	4.56*
MothAsp (mean)	5.76	5.41*	5.00	4.84*	5.01	4.84*	4.88	4.63*
ParInfl (% "great deal")	50.5	50.6	47.1	45.0	59.4	53.6	54.8	46.9
Curriculum								
% General	8.3	13.5	21.4	30.6*	17.0	29.0*	22.5	28.8*
% Academic	91.2	84.1	76.4	61.7*	81.5	63.2*	65.1	41.4*
% Vocational	.5	2.3	2.2	7.7*	1.6	7.8*	12.4	29.8*
Aptitude (mean)	61.23	58.32*	58.19	54.48*	54.69	53.49	56.01	52.57*
H.S. GPA (mean)	3.60	3.16*	3.31	3.01*	3.16	2.96*	3.07	2.86*
Math (mean)	5.72	4.88*	4.23	3.82*	4.62	3.98*	4.85	3.84*
English (mean)	6.24	6.17	6.22	6.13	6.20	6.10	6.13	5.98
Science (mean)	5.31	4.68*	3.50	3.32	4.11	3.63*	4.08	3.27*
SocStud (mean)	5.21	5.25	5.39	5.22	5.48	5.34	5.43	5.01*
FrnLang (mean)	4.34	3.51*	3.75	2.92*	3.36	2.88*	2.89	2.11*
RemRdg (% Yes)	2.5	2.0	2.4	2.3	1.3	4.8*	2.9	5.3
RemMth (% Yes)	.8	1.0	.3	3.3*	0	2.5*	1.4	3.2
TchrInfl (% "great deal")	10.4	9.5	15.5	18.7	20.2	20.5	6.3	9.3
CounInfl (% "great deal")	7.5	10.8	7.5	8.4	15.0	11.9	11.8	10.9
WrkCouns (% agree)	12.7	15.5	13.2	23.0	24.9	25.6	22.6	33.1*
EdCouns (% agree)	54.2	58.6	55.6	60.0	13.4	64.6	66.8	62.5
CollGPA (mean)	3.35	2.95*	3.22	2.99*	3.12	2.85	2.92	2.76*
EarlyMarr (% Yes)	18.1	30.7*	26.6	36.5*	28.9	38.6*	24.6	39.4*
EarlyChld (% Yes)	.8	8.5*	2.6	16.3*	5.5	16.1*	4.1	17.0*
EarlyWrk (mean)	1.30	2.12*	1.93	2.50*	1.71	2.29*	2.18	2.67*

* $p \leq .01$

TABLE 4.3. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SUCCESSFUL PURSUIT OF FIELD

VARIABLE	SocSci		Bio/PhySci/Math		Comp/Eng/Arch		Agric/HmEc/Voc	
	succ	unsucc	succ	unsucc	succ	unsucc	succ	unsucc
Sex (% female)	49.6	53.0	38.0	35.2	4.8	8.1	40.5	37.6
Race								
% Hispanic	2.2	2.9	.8	1.4	.5	4.0	1.0	3.9
% black	6.5	7.6	2.7	6.1	2.4	6.3	5.5	4.4
% white	91.3	89.5	96.5	92.5	97.1	89.7	93.5	91.8
Concept (mean)	.07	.07	.12	.10	.17	.12	.06	.00
Locus (mean)	.25	.19	.34	.22	.24	.11*	.15	-.03*
SES (mean)	.31	.31	.44	.33	.33	.23	.18	.09
EducAsp (mean)	5.21	4.98*	5.24	5.18	5.02	4.80*	4.67	4.35*
FathAsp (mean)	5.05	4.87	4.98	4.98	4.96	4.72*	4.54	4.41
MothAsp (mean)	5.09	4.87*	5.09	5.04	4.97	4.80*	4.59	4.43
ParInfl (% "great deal")	44.4	46.9	56.1	49.6	52.2	50.1	56.2	40.2*
Curriculum								
% General	19.1	27.0	6.5	15.6	10.9	24.1*	24.8	31.5
% Academic	78.0	67.4	91.4	82.1	81.8	68.2*	59.6	45.8
% Vocational	3.0	5.6	2.1	2.4	7.3	7.7*	15.6	22.7
Aptitude (mean)	57.25	55.38*	61.37	57.20*	58.32	54.95*	55.38	52.56*
H.S. GPA (mean)	3.14	2.98*	3.57	3.18*	3.27	2.91*	3.07	2.80*
Math (mean)	4.31	4.11	5.83	5.14*	5.82	5.05*	4.45	3.72*
English (mean)	5.98	6.09	6.13	6.00	5.98	5.96	6.09	5.93
Science (mean)	4.07	3.77	5.45	5.11	4.93	4.32*	3.91	3.56
SocStud (mean)	5.55	5.50	4.81	5.11	4.99	5.03	5.06	5.14
FrnLang (mean)	3.76	3.13*	3.82	2.97*	2.66	2.32	2.09	2.00
RemRdg (% Yes)	1.0	2.9	2.2	10.0	1.1	3.5	3.1	4.7
RemMth (% Yes)	4.0	2.9	0	1.8*	2.0	2.5	2.2	2.0
TchrInfl (% "great deal")	8.5	9.0	23.2	9.7*	11.5	8.0	11.5	8.8
CounInfl (% "great deal")	4.7	7.5	13.8	13.9	4.8	9.5	11.3	8.8
WrkCouns (% agree)	12.6	16.8	18.8	20.8	26.3	26.7	32.3	26.2
EdCouns (% agree)	56.7	56.8	60.9	63.1	62.6	71.2	58.4	58.3
CollGPA (mean)	3.14	2.94*	3.22	2.92*	3.07	2.16*	2.98	2.84
EarlyMarr (% Yes)	23.8	34.4*	19.4	33.3*	23.4	28.4	31.8	45.0*
EarlyChld (% Yes)	5.0	15.4*	2.0	10.5*	5.9	12.2	7.1	18.3*
EarlyWrk (mean)	1.69	2.33*	1.54	2.22*	1.54	2.51*	2.13	2.84*

* p≤.01

TABLE 4.3. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SUCCESSFUL PURSUIT OF FIELD

VARIABLE	Health	
	succ	unsucc
Sex (% female)	96.6	75.4*
Race		
% Hispanic	.9	4.0*
% black	2.4	8.8*
% white	96.7	87.2*
Concept (mean)	.08	.03
Locus (mean)	.29	.14*
SES (mean)	.25	.18
EducAsp (mean)	4.77	4.78
FathAsp (mean)	4.71	4.75
MothAsp (mean)	4.75	4.78
ParInfl (% "great deal")	49.9	48.2
Curriculum		
% General	16.7	28.6*
% Academic	79.3	63.1*
% Vocational	4.0	8.3*
Aptitude (mean)	56.57	52.97*
H.S. GPA (mean)	3.33	2.94*
Math (mean)	4.53	4.12*
English (mean)	6.07	6.04
Science (mean)	4.85	4.18*
SocStud (mean)	5.11	5.22
FrnLang (mean)	3.65	2.64*
RemRdg (% Yes)	1.3	3.4
RemMth (% Yes)	1.7	4.1
TchrInfl (% "great deal")	7.6	8.4
CounInfl (% "great deal")	10.7	11.9
WrkCouns (% agree)	23.3	23.8
EdCouns (% agree)	62.9	63.3
CollGPA (mean)	3.07	2.85*
EarlyMarr (% Yes)	34.8	47.0*
EarlyChld (% Yes)	6.1	20.2*
EarlyWrk (mean)	1.87	2.28*

* $p \leq .01$

TABLE 4.4. STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR PREDICTORS OF SUCCESSFUL PURSUIT OF OCCUPATION

Variable	Prof 2	Prof 1	Tech	Tchr	Mgr/Prop	Craft/Oper	Cler/Sales	Service	Farm/Lab	Military
Sex	-.228	.183	.038	.261	-.470	-.859	.569	.551	-.351	-.639
Hispanic	.136	.009	-.205	-.106	-.078	.010	.081	-.548	.139	-.282
Locus	-.217	-.041	.078	.159	.748	-.060	.286	.124	.381	.030
ParInfl	-.060	-.011	.291	-.032	.095	.158	.086	.386	-.049	-.078
H.S.GPA	.463	.365	.416	.194	.027	-.031	.095	-.355	.595	.268
CollGPA	.437	.161	.392	.475	*	*	*	*	*	*
Aptitude	.131	.186	.159	-.480	.019	.005	.065	.080	-.305	.164
Math	.047	.105	-.241	.421	.257	-.078	.152	-.178	-.180	.417
RemMth	-.008	-.013	-.071	-.193	-.002	-.226	-.027	-.449	-.087	-.418
Science	.133	.203	.174	.132	-.136	.001	-.096	.100	-.049	-.098
EdCouns	-.118	.041	.256	.044	.136	-.138	-.026	.119	.423	-.243
EarlyMarr	-.178	-.247	.175	-.043	.226	-.009	-.070	-.105	.341	.190
EarlyChild	-.141	-.313	-.194	-.358	-.129	.102	-.103	-.057	-.493	.071
EarlyWork	-.367	-.341	-.193	-.463	.362	.344	.734	.239	.028	.174
Canon. Corr	.419	.306	.332	.359	.303	.442	.427	.252	.367	.431
Eta-Squared	.176	.094	.110	.129	.092	.195	.182	.064	.135	.186
Sig. of lambda	.000	.000	.000	.000	.000	.000	.000	.000	.000	.027
% class correct	77.9	68.1	69.1	71.5	65.9	87.2	85.7	62.4	67.5	68.5
Tau	.406	.288	.281	.349	.283	.428	.467	.228	.340	.342

* CollGPA not included in analysis

TABLE 4.5. STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR PREDICTORS OF SUCCESSFUL PURSUIT OF FIELD

Variable	Preprof	Human/Art	Educat	Business	SocSci	Bio/PhySci/ Math	Comp/Eng/ Arch	Agri/HmEc/ Vocat	Health
Sex	-.173	-.023	.337	-.297	-.238	-.090	-.147	-.097	.610
Locus	-.355	-.090	.207	.028	-.044	.055	.140	.061	.010
ParInfl	-.095	-.086	-.032	.181	-.088	.020	.100	.405	.078
FathAsp	.130	.003	.135	.129	.058	-.274	.110	-.042	-.148
TchrInfl	.042	-.102	.011	-.081	.083	.475	.063	-.021	-.002
H.S.GPA	.302	.198	.169	.177	.051	.177	.091	.352	.384
CollGPA	.527	.406	.463	.217	.604	.281	.551	.295	.097
Aptitude	-.023	.196	-.339	.314	-.084	.266	.087	.139	.131
Math	.242	.061	.332	.217	-.066	.186	.270	.417	-.200
SocStud	-.121	.174	.106	.339	.024	-.141	-.168	-.102	-.113
FrnLang	.216	.126	.123	.002	.333	.166	-.083	-.444	.205
Science	.046	-.046	.111	.041	.135	-.010	-.100	-.049	.378
EdCouns	-.025	-.050	.249	.129	.018	-.224	-.180	-.018	.027
EarlyChld	-.123	-.480	-.300	-.325	-.346	-.271	-.074	-.213	-.256
EarlyWork	-.424	-.425	-.355	-.180	-.552	-.363	-.527	-.542	-.222
Canon Corr	.438	.340	.395	.413	.302	.410	.397	.365	.471
Eta-Squared	.192	.116	.156	.171	.091	.168	.158	.133	.222
Sig. of lambda	.000	.000	.000	.000	.000	.000	.000	.000	.000
% class correct	79.1	63.5	67.7	65.8	72.0	75.0	68.9	67.9	68.7
Tau	.375	.283	.320	.295	.361	.365	.311	.230	.353

TABLE 5.1. BIVARIATE ANALYSIS OF PREDICTORS
OF SELECTING OCCUPATIONS

VARIABLES	Profess 2	Profess 1	Technical	Teacher
*Sex (% female)	51.5	57.5	38.6	81.9
Race				
*% Hispanic	6.0	5.4	6.9	6.4
*% black	10.9	12.0	14.5	8.7
*% white	83.1	82.5	78.6	85.0
*Concept (mean)	.17	.06	.09	-.08
*Locus (mean)	.25	.12	.02	.06
*SES (mean)	.31	.10	-.08	.02
*EducAsp (mean)	4.32	3.68	3.15	3.83
*MothAsp (mean)	4.38	3.81	3.38	3.86
*ParInfl (% "great deal")	37.9	32.9	29.5	34.0
*ReadTo (% Yes)	61.5	56.3	48.3	56.7
Curriculum				
*% General	23.1	32.5	34.0	41.0
*% Academic	69.9	52.4	40.0	47.6
*% Vocational	7.1	15.1	26.1	11.5
*Aptitude (mean)	55.71	52.44	50.85	50.60
*H.S. GPA (mean)	3.24	3.01	2.88	3.01
*Math (mean)	4.97	4.44	4.50	3.95
*English (mean)	6.03	5.99	5.89	6.00
*Science (mean)	4.69	3.83	3.68	3.40
*HistSoc (mean)	4.85	4.73	4.63	4.63
*FrnLang (mean)	2.66	2.08	1.62	2.01
*RemMth (% Yes)	16.0	24.2	27.2	27.0
*RemEng (% Yes)	17.7	24.9	30.6	28.1
*AdvMth (mean)	3.24	2.63	2.50	2.22
*AdvSci (mean)	1.15	.76	.70	.54
*VocCrse (mean)	2.72	3.69	4.37	3.30
*CoopWS (% Yes)	10.0	14.5	19.6	12.6
*Homewk (mean)	4.12	3.75	3.49	3.68
*CrseHard (% "great deal")	1.6	2.2	2.3	2.5
*StudyHab (% "great deal")	14.0	16.6	16.3	18.5
*Absent (mean)	2.34	2.41	2.37	2.29
*AcadQual (mean)	2.91	2.78	2.73	2.77
*AcadEmph (% agree)	69.4	67.0	68.8	70.8
*VocEmph (% agree)	51.8	63.8	75.5	60.5
*WorkEmph (% agree)	47.5	55.7	60.7	54.8
*EdCouns (% agree)	66.7	63.4	66.1	68.0
*WorkCouns (% agree)	32.2	37.3	43.9	42.6
*CounsInfl (% "great deal")	11.3	11.9	12.5	13.4
*TchrInfl (% "great deal")	17.7	17.1	15.5	24.1
*SportAct (mean)	1.08	.97	.86	1.04
*AcadAct (mean)	1.03	.85	.71	.95
*ServAct (mean)	29.8	21.6	14.6	23.8
*WrkImpt (% agree)	90.7	90.9	91.8	88.3
*MonyImpt (% agree)	29.2	29.6	32.7	17.5
WorkValues				
*Exper (% "very impt")	22.4	29.8	26.1	33.1
*GdInc (% "very impt")	37.7	41.4	53.0	25.7
*JobSec (% "very impt")	57.3	55.9	65.8	45.0
*IntWk (% "very impt")	92.5	89.6	86.2	90.0
*FreeDec (% "very impt")	67.3	62.0	56.2	64.7
*People (% "very impt")	61.3	66.8	59.9	73.9
*WrkStatus (% fulltime)	7.4	8.0	13.0	6.1
Expectations				
*ErlyMarr (% Yes)	12.1	20.7	24.7	29.6
*ErlyChld (% Yes)	3.4	6.7	7.5	9.0
*NumChld (mean)	3.18	3.21	3.09	3.46

TABLE 5.1. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SELECTING OCCUPATION

VARIABLES	Mgr/Prop	Crafts/Oper	Cler/Sales	Service
Sex (% female)	42.0	10.2	87.1	68.1
Race				
% Hispanic	5.1	7.6	7.7	7.6
% black	12.0	9.2	14.5	10.7
% white	83.0	83.1	77.9	81.7
Concept (mean)	.07	-.02	-.15	-.11
Locus (mean)	.04	-.24	-.10	-.16
SES (mean)	.13	-.28	-.30	-.25
EducAsp (mean)	3.14	1.88	2.26	2.35
MothAsp (mean)	3.46	2.35	2.65	2.69
ParInfl (% "great deal")	32.3	24.2	25.0	23.3
ReadTo (% Yes)	53.0	39.3	51.4	49.7
Curriculum				
% General	39.2	45.3	35.4	51.7
% Academic	37.8	14.2	17.8	20.8
% Vocational	23.1	40.5	46.8	27.5
Aptitude (mean)	50.11	46.20	46.31	46.45
H.S. GPA (mean)	2.79	2.45	2.82	2.61
Math (mean)	4.10	3.45	3.40	3.40
English (mean)	5.90	5.59	5.82	5.76
Science (mean)	3.34	2.86	2.64	2.90
HistSoc (mean)	4.71	4.46	4.45	4.55
FrnLang (mean)	1.73	.67	1.78	1.13
RemMth (% Yes)	30.4	45.1	33.6	42.2
RemEng (% Yes)	30.7	45.8	33.4	40.7
AdvMth (mean)	2.16	1.26	1.49	1.33
AdvSci (mean)	.51	.28	.23	.32
VocCrse (mean)	4.20	5.00	4.99	4.18
CoopWS (% Yes)	21.9	32.6	26.5	24.2
Homewk (mean)	3.39	2.72	3.35	3.17
CrseHard (% "great deal")	2.7	4.8	2.6	4.9
StudyHab (% "great deal")	19.7	18.6	13.3	18.7
Absent (mean)	2.59	2.67	2.42	2.65
AcadQual (mean)	2.70	2.59	2.64	2.58
AcadEmph (% agree)	68.1	63.0	65.6	67.1
VocEmph (% agree)	71.7	84.0	74.2	75.3
WorkEmph (% agree)	61.7	64.4	59.5	63.3
EdCouns (% agree)	59.9	57.8	63.3	61.1
WorkCouns (% agree)	42.5	51.3	55.7	45.4
CounsInfl (% "great deal")	10.3	9.1	10.6	11.0
TchrInfl (% "great deal")	11.5	11.3	14.5	10.2
SportAct (mean)	1.01	.78	.74	.85
AcadAct (mean)	.75	.51	.84	.64
ServAct (mean)	19.7	8.6	15.5	14.2
WrkImpt (% agree)	70.7	88.3	88.3	87.7
MonyImpt (% agree)	37.8	42.0	26.9	29.5
WorkValues				
Exper (% "very impt")	35.2	38.5	36.0	29.2
GdInc (% "very impt")	52.9	56.3	52.7	43.4
JobSec (% "very impt")	62.7	60.6	63.7	58.1
IntWk (% "very impt")	87.3	76.6	84.6	86.4
FreeDec (% "very impt")	70.1	56.9	56.5	64.6
People (% "very impt")	71.7	58.5	75.0	73.0
WrkStatus (% fulltime)	15.7	20.3	8.8	11.6
Expectations				
ErlyMarr (% Yes)	23.3	30.3	46.4	40.7
ErlyChld (% Yes)	7.4	12.0	16.5	15.5
NumChld (% Yes)	3.20	3.01	3.18	3.20

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TABLE 5.1. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SELECTING OCCUPATION

VARIABLES	Farm/Lab	Military	Housewife
Sex (% female)	13.3	25.3	99.0
Race			
% Hispanic	6.6	8.9	4.4
% black	4.7	25.0	4.8
% white	88.7	66.1	90.8
Concept (mean)	-.07	.02	-.17
Locus (mean)	-.23	-.16	-.06
SES (mean)	-.28	-.25	-.31
EducAsp (mean)	1.93	2.56	1.92
MothAsp (mean)	2.46	2.99	2.38
ParInfl (% "great deal")	25.1	20.6	20.8
ReadTo (% Yes)	42.9	46.7	53.9
Curriculum			
% General	48.2	45.7	49.1
% Academic	15.5	27.3	20.2
% Vocational	36.3	26.9	30.6
Aptitude (mean)	46.51	49.14	47.57
H.S. GPA (mean)	2.49	2.65	2.79
Math (mean)	3.40	4.20	3.23
English (mean)	5.67	5.81	5.81
Science (mean)	2.93	3.53	2.62
HistSoc (mean)	4.53	4.68	4.50
FrnLang (mean)	.69	1.57	1.50
RemMth (% Yes)	44.5	36.6	37.5
RemEng (% Yes)	45.8	39.0	35.7
AdvMth (mean)	1.25	1.80	1.40
AdvSci (mean)	.26	.55	.26
VocCrse (mean)	4.99	4.11	4.27
CoopWs (% Yes)	31.3	17.8	18.0
Homewk (mean)	2.73	3.05	3.34
CrseHard (% "great deal")	5.7	4.6	3.6
StudyHab (% "great deal")	20.7	21.3	18.4
Absent (mean)	2.71	2.58	2.63
AcadQual (mean)	2.58	2.67	2.60
AcadEmph (% agree)	60.7	73.4	65.0
VocEmph (% agree)	82.5	75.4	72.2
WorkEmph (% agree)	66.5	62.7	61.2
EdCouns (% agree)	58.4	59.0	58.7
WorkCouns (% agree)	51.9	46.0	47.4
CounsInfl (% "great deal")	8.0	7.2	6.7
TchrInfl (% "great deal")	8.8	9.7	8.0
SportAct (mean)	.93	.92	.59
AcadAct (mean)	.66	.66	.80
ServAct (mean)	10.7	11.5	15.2
WrkImpt (% agree)	85.0	87.3	66.4
MonyImpt (% agree)	38.4	32.4	14.9
Work Values			
Exper (% "very impt")	42.6	19.5	25.1
GdInc (% "very impt")	51.5	41.8	35.8
JobSec (% "very impt")	52.4	60.8	43.0
IntWk (% "very impt")	75.7	81.1	45.4
FreeDec (% "very impt")	65.2	47.4	59.8
People (% "very impt")	55.5	63.1	63.6
WrkStatus (% fulltime)	21.3	12.3	6.2
Expectations			
ErlyMarr (% Yes)	34.7	21.3	70.4
ErlyChld (% Yes)	13.8	12.8	29.9
NumChld (mean)	3.19	3.07	3.59

TABLE 5.2. BIVARIATE ANALYSIS OF PREDICTORS OF SELECTING FIELDS OF STUDY

VARIABLE	Preprof	Human/Art	Educ	Business	SocSci
*Sex (% female)	49.3	60.0	76.5	56.7	71.9
Race					
% Hispanic	5.4	4.2	4.9	5.4	6.3
*% black	10.4	10.7	7.1	11.4	11.1
*% white	84.3	85.1	88.0	83.2	82.6
*Concept (mean)	.29	.08	.01	.07	.05
*Locus (mean)	.35	.19	.15	.13	.27
*SES (mean)	.41	.22	.09	.15	.30
*EducAsp (mean)	4.74	3.97	4.09	3.79	4.34
*MothAsp (mean)	4.68	4.66	4.07	3.87	4.33
*ParInfl (% "great deal")	44.5	33.1	39.4	36.8	39.0
*ReadTo (% Yes)	63.1	61.2	60.3	55.4	63.0
Curriculum					
*% General	16.2	31.6	39.5	29.3	24.0
*% Academic	79.1	59.9	52.1	48.1	70.3
*% Vocational	4.6	8.6	8.4	22.6	5.7
*Aptitude (mean)	57.23	53.57	51.35	51.91	54.68
*H.S. GPA (mean)	3.39	3.06	3.07	3.06	3.11
*Math (mean)	5.19	4.15	4.16	4.43	4.54
*English (mean)	6.06	6.10	6.05	5.97	6.14
*Science (mean)	4.93	3.53	3.69	3.42	4.03
*HistSoc (mean)	4.92	4.74	4.79	4.73	5.10
*FrnLang (mean)	2.97	2.62	2.07	2.01	2.75
*RemMth (% Yes)	11.2	23.6	25.6	20.8	17.5
*RemEng (% Yes)	11.8	23.7	24.2	22.3	18.0
*AdvMth (mean)	3.53	2.55	2.42	2.67	2.88
*AdvSci (mean)	1.29	.63	.63	.58	.78
*VocCrse (mean)	2.58	3.21	3.31	4.34	2.70
*CoopWS (% Yes)	8.9	9.0	10.3	16.8	10.7
*Homewk (mean)	4.25	3.78	3.78	3.73	4.06
CrseHard (% "great deal")	1.1	1.8	1.2	1.3	1.3
*StudyHab (% "great deal")	12.8	17.6	13.4	15.4	17.5
*Absent (mean)	2.21	2.42	2.27	2.31	2.38
*AcadQual (mean)	2.96	2.83	2.83	2.80	2.86
*AcadEmph (% agree)	72.4	64.6	70.0	68.2	66.7
*VocEmph (% agree)	48.2	60.1	59.2	64.2	56.6
*WorkEmph (% agree)	44.4	53.4	51.8	54.6	52.2
EdCouns (% agree)	65.3	64.3	69.4	65.6	65.1
*WorkCouns (% agree)	29.9	35.2	41.6	41.1	31.7
*CounsInfl (% "great deal")	10.6	10.7	14.5	11.4	13.8
*TchrInfl (% "great deal")	16.0	22.8	23.6	14.5	18.2
*SportAct (mean)	1.16	.92	1.30	1.06	1.03
*AcadAct (mean)	1.07	1.03	.98	.85	.90
*ServAct (mean)	.36	.26	.30	.23	.31
*WrkImpt (% agree)	94.6	89.3	90.8	92.8	89.6
*MonyImpt (% agree)	34.0	28.0	18.1	34.7	26.3
Work Values					
*Exper (% "very impt")	21.3	33.1	30.4	30.0	20.3
*GdInc (% "very impt")	42.3	33.1	24.2	51.1	29.4
*JobSec (% "very impt")	64.9	43.8	44.1	65.3	48.6
*IntWk (% "very impt")	93.4	91.5	89.0	88.2	92.4
*FreeDec (% "very impt")	72.5	69.0	64.1	62.9	65.6
*People (% "very impt")	60.7	67.8	74.1	71.6	68.7
*WrkStatus (% fulltime)	7.4	6.1	5.5	9.2	4.3
Expectations					
*ErlyMarr (% Yes)	8.9	15.5	22.9	21.6	16.4
*ErlyChld (% Yes)	1.2	4.0	5.2	5.0	4.7
*NumChld (mean)	3.24	3.13	3.41	3.28	3.31

TABLE 5.2. (continued) BIVARIATE ANALYSIS OF PREDICTORS OF SELECTING FIELDS OF STUDY

VARIABLE	Bio/PhySci/Math	Comp/Eng/Arch	Agric/HmEc/Voc	Health
*Sex (% female)	39.8	23.9	43.8	88.3
Race				
% Hispanic	4.2	5.6	6.4	5.2
*% black	6.7	12.2	8.0	11.6
*% white	89.1	82.2	85.7	83.2
*Concept (mean)	.08	.17	.03	.00
*Locus (mean)	.22	.18	.03	.14
*SES (mean)	.33	.23	.01	.02
*EducAsp (mean)	4.36	4.10	3.14	3.81
*MothAsp (mean)	4.32	4.09	3.31	3.81
*ParInfl (% "great deal")	36.4	36.6	33.1	33.9
*ReadTo (% Yes)	61.1	52.1	51.8	63.1
Curriculum				
*% General	21.6	20.9	37.0	27.9
*% Academic	73.0	67.0	32.8	57.5
*% Vocational	5.5	12.1	30.2	14.6
*Aptitude (mean)	57.42	55.76	50.13	51.47
*H.S. GPA (mean)	3.30	3.20	2.87	3.11
*Math (mean)	5.37	5.46	3.87	4.48
*English (mean)	6.03	6.00	5.86	6.01
*Science (mean)	5.29	4.62	3.43	4.52
*HistSoc (mean)	4.79	4.71	4.65	4.70
*FrnLang (mean)	2.76	2.17	1.31	2.18
*RemMth (% Yes)	13.8	15.3	32.4	21.4
*RemEng (% Yes)	17.3	19.0	35.0	21.5
*AdvMth (mean)	3.55	3.59	2.09	2.67
*AdvSci (mean)	1.44	1.26	.51	.94
*VocCrse (mean)	2.47	3.68	4.86	3.33
*CoopWS (% Yes)	7.9	11.2	21.1	17.0
*Homewk (mean)	4.21	3.93	3.38	3.99
CrseHard (% "great deal")	1.8	1.5	2.4	1.9
*StudyHab (% "great deal")	14.1	15.5	16.7	13.7
*Absent (mean)	2.16	2.18	2.37	2.23
*AcadQual (mean)	2.96	2.87	2.74	2.80
*AcadEmph (% agree)	67.9	69.7	66.2	70.0
*VocEmph (% agree)	52.4	61.1	76.1	61.2
*WorkEmph (% agree)	47.0	52.9	60.2	55.8
EdCouns (% agree)	63.8	66.6	68.1	66.7
*WorkCouns (% agree)	32.2	35.3	47.0	39.7
*CounsInfl (% "great deal")	10.0	13.2	11.9	13.5
*TchrInfl (% "great deal")	15.9	16.2	15.2	12.8
*SportAct (mean)	1.12	1.08	.99	.97
*AcadAct (mean)	.97	.84	.78	.98
*ServAct (mean)	.23	.22	.18	.24
*WrkImpt (% agree)	84.8	92.3	89.1	94.5
*MonyImpt (% agree)	23.3	34.0	27.5	20.9
Work Values				
*Exper (% "very impt")	19.0	21.2	37.1	28.2
*GdInc (% "very impt")	29.8	49.7	45.4	42.9
*JobSec (% "very impt")	47.4	64.7	59.9	69.2
*IntWk (% "very impt")	91.4	87.0	85.8	92.7
*FreeDec (% "very impt")	59.5	55.2	64.5	52.8
*People (% "very impt")	53.2	53.3	65.0	72.8
*WrkStatus (% fulltime)	4.1	9.9	13.4	7.8
Expectations				
*ErlyMarr (% Yes)	9.0	14.1	27.6	26.9
*ErlyChld (% Yes)	1.8	3.9	9.1	7.2
*NumChld (mean)	3.15	3.17	3.28	3.42

TABLE 5.3. STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR PREDICTORS OF SELECTING OCCUPATIONS

VARIABLE	Profess 2	Profess 1	Technical	Teacher	Mgr/Prop	Crafts/Oper
Sex	-.035	.222	-.432	.480	-.343	-.663
SES	.001	-.043	-.239	-.108	.516	-.012
Black	-.002	.045	.232	-.212	.140	-.073
Hisp	.024	.021	.053	-.072	-.030	-.019
Concept	.029	-.002	-.045	-.049	.011	.056
Locus	-.015	-.059	.077	-.109	.196	-.003
EdAsp	.549	.627	-.092	.176	.042	-.474
MothAsp	.090	.118	.004	.659	.046	-.110
Aptitude	.112	.178	.091	-.223	-.117	-.075
H.S. GPA	.071	.056	-.011	.011	-.203	-.032
AcadCurr	-.004	.144	-.058	-.042	-.008	-.003
Science	.234	-.006	.033	-.072	-.327	.032
English	-.059	.016	-.056	.008	.118	-.062
HistSoc	.028	-.005	-.053	-.390	.057	.003
Math	-.036	-.014	.193	-.084	-.020	.028
RemMath	.017	.014	-.078	.026	-.054	.055
AdvMath	-.025	.082	.418	-.145	.059	-.095
VocCrse	-.234	.027	.237	-.220	.060	.016
CoopWS	.030	-.034	.031	-.072	.056	.061
StudyHab	-.019	.052	.003	.091	.045	-.093
Homework	.110	-.059	-.031	-.078	-.086	-.078
Absent	.071	.063	-.086	-.104	.074	-.003
VocEmph	-.105	-.027	.265	-.052	.048	.059
AcadEmph	.023	-.016	-.042	.047	-.007	-.003
SportAct	-.033	-.013	-.185	.128	.134	-.055
AcadAct	.100	-.077	-.105	-.014	-.029	-.040
EdCouns	-.020	.014	.108	-.005	-.062	-.026
WrkCouns	.014	-.079	-.004	.031	-.065	.013
WrkStatus	-.002	-.467	.068	-.028	.165	.030
WrkImpt	-.024	.061	.035	.009	.003	.067
JobSec	.048	-.093	.223	-.236	.031	.006
IntWrk	.046	.054	.076	.055	-.101	-.033
FreeDec	.101	-.062	-.227	.051	.256	-.046
GdInc	-.070	-.056	.171	-.294	.216	.065
People	-.090	.052	-.144	.081	.206	-.079
Exper	-.084	.045	-.236	.165	.151	.053
ErlyMarr	-.065	-.030	.043	.056	-.109	-.104
ErlyChld	.029	-.020	-.116	-.027	-.073	-.006
NumChld	-.071	-.038	-.145	.165	.058	-.010
Canonical Corr	.397	.276	.173	.225	.164	.438
Eta-Squared	.158	.076	.030	.051	.027	.192
Sig. of Wilks' Lambda	.000	.000	.000	.000	.000	.000
% class. correct	85.6	69.2	88.8	92.4	86.3	87.6
Tau	.411	.252	.356	.359	.378	.389

TABLE 5.3. (continued) STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR PREDICTORS OF SELECTING OCCUPATIONS

VARIABLE	Cler/Sales	Service	Farm/Lab	Military	Housewife
Sex	.598	.378	-.593	-.497	.471
SES	.031	-.058	-.058	-.078	-.039
Black	.054	-.129	-.234	.383	-.329
Hisp	.025	-.006	-.097	.155	-.051
Concept	-.079	.000	-.032	.114	.070
Locus	.003	-.051	-.002	-.023	.065
EdAsp	-.433	-.330	-.422	-.462	-.453
MothAsp	-.106	-.170	.029	.046	-.038
Aptitude	-.143	-.097	-.067	.251	.094
H.S.GPA	.116	-.246	-.050	-.018	.029
AcadCurr	-.115	.033	.009	-.020	-.011
Science	-.092	-.042	.045	.066	-.077
English	.080	-.001	-.007	-.084	.024
HistSoc	-.049	.071	-.020	.113	.019
Math	-.030	-.056	-.041	.262	.010
RemMath	-.081	.105	.000	.034	-.003
AdvMath	.072	-.199	-.108	-.292	.004
VocCrse	.206	-.155	.084	-.085	-.018
CoopWS	-.014	.022	-.001	-.050	-.134
StudyHab	-.032	.032	-.008	.052	.030
Homework	.025	.033	-.095	-.155	.040
Absent	-.121	-.045	.048	.001	.040
VocEmph	-.074	.058	.054	.109	-.018
AcadEmph	-.025	.015	-.071	.142	.012
SportAct	-.031	.155	.077	-.084	-.046
AcadAct	-.050	.050	.112	-.018	.007
EdCouns	.019	.106	-.061	-.079	-.029
WrkCouns	.114	-.137	.002	-.006	.002
WrkStatus	-.075	.009	.101	-.125	-.035
WrkImpt	.001	.039	-.022	.094	-.358
JobSec	.069	.022	-.121	.218	-.111
IntWrk	-.012	.091	-.059	.070	-.188
FreeDec	-.128	.087	.201	-.342	.130
GdInc	.094	-.213	.054	-.208	.015
People	.097	.104	-.159	.069	-.073
Exper	-.013	-.172	.195	-.210	-.034
ErlyMarr	.085	.106	.037	-.146	.275
ErlyChld	.007	.019	.018	.097	.113
NumChld	-.035	.029	.060	.000	-.232
Canonical Corr.	.394	.184	.254	.152	.293
Eta-Squared	.155	.033	.065	.023	.086
Sig. of Wilks' Lambda	.000	.000	.000	.000	.000
% class. correct	85.5	91.8	93.3	94.9	93.8
Tau	.381	.338	.341	.265	.286

TABLE 5.4. STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR PREDICTORS OF SELECTING FIELDS OF STUDY

VARIABLE	Preprof	Human/Art	Education	Business	SocSci
Sex	-.023	-.011	.422	-.002	.444
SES	.040	.034	-.182	.120	-.016
Black	.036	-.013	-.321	-.003	.046
Hisp	.013	-.028	-.134	-.020	.109
Concept	.120	.013	-.065	-.049	-.062
EdAsp	.435	-.043	.346	-.190	.325
MothAsp	.266	.094	.113	.036	.211
Aptitude	.010	.200	-.278	-.096	.241
H.S.GPA	.208	-.092	-.056	.127	-.245
AcadCurr	-.009	.187	.002	-.115	.189
Science	.200	-.296	.118	-.348	-.091
English	-.131	.214	.034	.019	-.068
HistSoc	.067	-.057	.043	.051	.349
Math	-.017	-.269	-.026	.050	-.061
FrnLang	.136	.245	-.113	-.037	.044
RemEng	-.029	.082	.020	-.114	.030
AdvMath	-.147	-.316	-.230	.353	-.170
AdvSci	.042	-.175	-.156	-.440	-.282
VocCrse	-.133	-.255	-.195	.400	-.315
CoopWS	.098	-.249	-.141	.090	.012
Homework	.065	-.092	.098	-.051	.098
VocEmph	-.024	.000	.010	-.080	-.019
WorkEmph	-.100	-.020	-.079	.049	.072
TchrInfl	-.053	.185	.198	-.141	.037
SportAct	-.002	-.168	.347	.039	.006
AcadAct	.015	.188	-.014	-.094	-.075
WrkStatus	.019	-.068	-.017	-.010	-.056
MonyImpt	.061	.074	-.111	.128	.074
WrkImpt	.066	-.044	.024	.009	.036
JobSec	.170	-.401	-.267	.062	-.123
IntWork	.010	.182	-.077	-.136	-.003
FreeDec	.215	.177	.055	-.039	.060
GdInc	-.017	-.127	-.281	.238	-.199
People	-.161	-.015	.131	.236	.091
Exper	-.086	.186	.088	-.052	-.170
ErlyMarr	-.018	-.117	.006	.042	.070
NumChld	.001	-.085	.065	.030	.067
Canonical Corr	.292	.298	.252	.299	.222
Eta-Squared	.085	.089	.063	.089	.049
Sig. of Wilks' Lambda	.000	.000	.000	.000	.000
% class correct	92.4	85.5	93.0	76.5	92.3
Tau	.471	.400	.460	.533	.464

TABLE 5.4 (continued) STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR PREDICTORS OF SELECTING FIELDS OF STUDY

VARIABLE	Bio/PhySci/Math	Comp/Eng/Arch	Agric/HmEc/Voc	Health
Sex	-.230	-.547	-.243	.673
SES	-.087	.026	.060	-.149
Black	-.013	.168	-.038	-.042
Hisp	.006	.062	.006	-.036
Concept	-.091	.056	.035	-.037
EdAsp	.089	-.046	-.546	.043
MothAsp	.025	-.109	-.265	-.179
Aptitude	.107	.059	.015	-.226
H.S.GPA	.046	.061	-.070	-.108
AcadCurr	-.122	-.019	-.083	.011
Science	.364	-.145	.080	.572
English	-.062	-.060	.017	-.023
HistSoc	-.114	-.090	-.047	-.068
Math	.065	.312	-.167	-.079
FrnLang	-.021	-.099	-.046	-.077
RemEng	-.007	-.023	.109	-.009
AdvMath	-.105	.259	-.001	-.098
AdvSci	.366	.401	.039	.168
VocCrse	-.272	.179	.157	-.103
CoopWS	.113	-.004	.000	.107
Homework	.049	-.024	-.038	.031
VocEmph	.081	.043	.090	-.065
WorkEmph	-.060	-.005	.038	.054
TchrInfl	-.022	.024	-.001	-.156
SportAct	.029	-.060	.003	-.034
AcadAct	.059	-.037	-.017	.007
WrkStatus	-.132	.016	.113	.059
MonyImpt	-.116	-.065	-.074	-.042
WrkImpt	-.187	-.007	-.055	.108
JobSec	-.045	.149	.015	.260
IntWork	.106	-.024	-.025	.033
FreeDec	.104	-.151	.124	-.285
GdInc	.056	.157	-.006	-.059
People	-.165	-.174	-.092	.136
Exper	.034	-.072	.140	-.017
ErlyMarr	.131	.031	-.032	.096
NumChld	-.124	-.087	.042	.131
Canonical Corr	.225	.412	.317	.320
Eta-Squared	.050	.170	.100	.102
Sig. of Wilks' Lambda	.000	.000	.000	.000
% class correct	94.8	81.7	93.2	90.4
Tau	.461	.327	.577	.458